



Texas, Our Texas:

An Assessment of Economic Development Programs and Prospects in the Lone Star State

VOLUME I REPORT

Prepared as a Public Service by



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To
*Lorraine, Skye, Bethany, Bryan, Blake,
and Meredith—my favorite Texans!*



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Authors' Foreword—Read Me First

When I was first asked by Jeff Moseley, the Executive Director of Texas Economic Development (TxED), to prepare a statewide economic development analysis, I was both daunted by the challenge and delighted at the prospect. I was born, raised, and educated in Texas and have spent my entire career here. I have never lived anywhere else and have passed up countless professional opportunities without hesitation simply because they would require me to reside outside the boundaries of my native state. No matter how much others may wish it, I'm not leaving.

I was born in Tyler, spent my childhood in Lindale, was educated in Waco (Baylor) and Houston (Rice), and have lived my adult life (in age, if not maturity) in Waco (where I still work) and, for the past decade, Odessa. I am in the process of trying to raise 5 young people to be among the new crop of great Texans. I have the privilege of traveling Texas on a continuing basis. I have covered well over 2 million miles within the borders of Texas during the course of my working life (and a lot more in other parts of the country and the world). I have the honor of visiting with hundreds of Texans from all walks of life each month and seeing all parts of this majestic state—urban, suburban, rural, border, North, South, East, and West—on a regular basis.

It has also been my great good fortune to know and work with most of the business, civic, and political leaders of my generation, and many of those that have gone before. I am keeping in touch with the new ones who are coming along as well, and they seem to get younger and more energetic every year. Some of those who helped and guided me in tangible ways over the years are no longer around—George Brown, John Ben Shepherd, John Connally, Charles Schreiner III, Bob Bullock, and John Justin, to name but a few. Governor Connally once told me that if I would take care of Texas, then Texas would take care of me. I hope this report is one small manifestation of that creed.

I must confess that my commitment of time and resources to this effort went far beyond my original intent. Such outcomes are all too common for me. Because of my love of and appreciation for Texas, I couldn't do anything other than pour my heart and soul into it. The report is quite lengthy (Texas is





a big state, and I am nothing if not verbose), and contains a lot of numbers, tedious analysis of individual issues, and other items that can probably be counted on to cure even the worst case of insomnia. I am suspicious, however, that you might detect an occasional hint of passion creeping into the narrative. If you don't, it's only because I didn't express myself well. It is definitely there.

Although it was an exhausting ordeal at times, I am very glad to have undertaken this effort. It gave me a chance to bring to bear 25 years of experience in studying all facets of the Texas economy at a critical juncture in our history. I was also able to pull decades of public policy and economic development experience and extensive modeling systems into the effort. Because I prepared the analysis on a pro bono basis and have no plans to seek public office, I had the great luxury of being candid (some would say blunt) in my assessments. We have big issues to confront, and no useful purpose is served by avoiding them. At the same time, I tried to be practical and provide meaningful context to properly frame major issues. I divided economic development into (1) the fundamental things that government does every day to maintain and sustain our state and (2) the incremental inducements which are required to achieve ultimate success. Similarly, I focused on the economic development process as a market for new and expanded business activity, which quite clearly illustrates how incentives have become part of the "price" that equates supply and demand. I am, after all, an economist.

I came to this project with a blank canvas and tried to paint a broad portrait. I sought to cover as many bases as practical (I'm sure I missed some) and didn't deliberately duck any issues. I approached the analysis with a deep respect for the principle of limited government that has long been shaped by our Populist traditions in Texas. I also recognize, however, that limited government does not mean no government at all, and that there are some very real arenas in which the State must be involved to secure our economic prosperity and destiny. Similarly, I conducted the project with a strong belief in the marvelous abilities and powers of markets. I also recognize, however, that they do not do all things perfectly. I hope that all of these factors shine through in the analysis and narrative.

I would be remiss if I didn't offer some words of heartfelt thanks. Countless people provided significant input to this





effort, many of whom have decades of experience in economic development, public policy, program administration, and elective office. Still others were site selection consultants, corporate executives, trade association representatives, educators, and individuals with specific expertise in areas of this analysis. There are literally hundreds of them, and my decision not to mention them by name represents a fear of omitting someone and in no way diminishes my gratitude. I do want to specifically mention the folks at Texas Economic Development who have been supportive throughout and responded to every request. Their enthusiasm, from the highest echelons through the entire organization, was in no way dampened by the fact they had absolutely no idea what I was going to say.

I also wish to acknowledge everyone at The Perryman Group for their good-natured indulgence (mostly) of what turned into a massive consumer of time and resources. Those who worked tirelessly on the project itself include: Skye Perryman, (Principal Investigator), Ginnie Gleghorn (Research Director), Dr. Eugene Baker, Shelia Smith, Nancy Risinger, Wendy Leighty, Elodia Cavazos, Karen Smith, Pete Tamez, Bob Orvis, and Aaron Young. As always, Rhoda Williams managed large chunks of my world throughout this endeavor, and Roy Reboli kept my rolling office headed down the road. I am also grateful to several clients who allowed me to reproduce certain aspects of prior work.

My final expressions of appreciation go to my family, who consistently endure my insane schedule with smiles and laughter. My wife, Lorraine, the former Mayor of Odessa, is a consummate public servant who works full time and then some on a pro bono basis to make Texas a better place in education, the arts, transportation, economic development, and a hundred other areas. She is the ultimate inspiration for just about anything I do that is worthwhile.

As a parting thought, I feel obliged to take all of the people mentioned above off the hook. In the final analysis, this report reflects independent investigation seasoned with a more than healthy dose of “what Ray thinks.” I am responsible for the entire content of this document, and no one who provided input or other assistance should be fired, demoted, voted out of office, tortured, maimed, ostracized, shot, or otherwise abused for their role in the process.





Despite the very long hours, in one sense I have it quite easy in offering this document. I don't have to answer to the electorate, and I don't have to balance a budget in the face of a mounting deficit. I thus have the freedom to give my version of what should be, while being cognizant of but not overly obsessed with the current reality. Part of that statement is my awkward way of expressing my sincere and eternal appreciation of our elected officials and the difficult jobs they consistently do, and part of it is to say that I am not naive enough to think that everything I have suggested will occur overnight. Resource and cost constraints are a fact of life, and I dare say that much of this agenda would be more than a little controversial. I suspect that everyone, including many of my clients and friends (I actually have a few), will find things to disagree with, and I have no monopoly on wisdom. I have certainly done nothing to diminish the employment status of my friends in the lobby. Nevertheless, if careful thought is given, vigorous debate occurs, and some of these items are at least modestly put in motion, much will have been accomplished for the place I call home. If that happens, I will be very pleased.

One final thought. Texas—thanks for this opportunity!

A handwritten signature in black ink that reads "Ray Perryman". The signature is written in a cursive, flowing style.

Ray Perryman



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Executive Summary



I. Introduction

In a remarkable odyssey of almost two centuries, a rugged and remote frontier outpost named for one of its many native tribes has been transformed into a major center of high technology and international commerce. From cattle to cotton to oil to electronics, Texas has repeatedly reoriented its business complex to meet evolving needs and circumstances. Even given the Lone Star State's remarkable capacity to adjust, **the current period is one of unprecedented challenges (and opportunities).**

Recent weakness, coming on the heels of a decade of remarkable progress, has led to increased dialog and efforts to proactively promote business expansion. During the 2001 legislative session, Texas lawmakers enacted House Bill 931 which provided for Texas Economic Development (TxED), the State's tourism and business development agency, to prepare an economic development plan. At the request of TxED, The Perryman Group (TPG), agreed to prepare this analysis on a *pro bono* basis.

The study includes analysis of a broad range of issues; in many cases the discussion includes quantification of specific costs or benefits. In this summary, recommendations are followed by brief highlights of some of the major findings from this endeavor. The full report contains extensive detail on a wealth of topics which impact the future of Texas.

II. Recommendations for Achieving Long-Term Economic Development and Sustainable Prosperity in Texas

A. Attitude Adjustment!

Perhaps the most important factors noted in the course of this investigation were the prevailing sentiments that (1) Texas has no reason to be actively involved in economic





development, and (2) the State government should not commit extensive effort or fiscal resources to such purposes. There are certainly reasonable historical perspectives that could lead to the conclusion, but they are not applicable in a modern framework for a variety of reasons. Texas was, during the oil boom of the 1970s and again in the early 1990s, a leading state in securing new and expanded economic activity. In recent years, however, the state has fallen behind in a variety of objective measures largely as a result of more aggressive initiatives in other states. Business is more mobile, competition is more global, and the locations process is more sophisticated. Much as changing technology and mobility have led to modifications in myriad areas of meeting public needs, similar adjustments are required in economic development.

On a more philosophical level, Texas has a long-standing Populist tradition with a general adherence to the concept of limited government. This basic framework shapes much of public policy within the state, and well it should. It must be recognized, however, that limited government does not mean no government at all, especially in cases where the public sector is the only effective means to achieve socially beneficial aims. In fact, transportation, municipal services, education, and many other functions which promote economic well-being (among other things) are provided or subsidized by government because of their role as public goods which cannot be efficiently provided by private interests.

Simply stated, inducements should be offered to the extent, but only to the extent, that the benefits to the state economy (excluding the profits to the firm making the investment on a risk-return basis) exceed the costs.

B. Simplify! Simplify! Simplify!

A common theme in discussions with economic development professionals, corporate decision-makers in multiple contexts, and representatives from national trade associations was the relative complexity of regulatory requirements and incentive programs in Texas. This fact was verified by independent review during the course of this investigation. Many of the implementation rules for regulations related to environmental guidelines, permitting, taxation and other parameters were difficult to interpret and subject to unpredictable outcomes.





Economic development initiatives were also cumbersome to access, perhaps reflecting the basic view that such programs are net detractions from the state revenue system with no material offsetting benefits. As examples, the process of approving an Enterprise Zone project is extremely repetitious and cumbersome, and the administrative structure of Smart Jobs—a recently abolished employer-driven workforce-training initiative—was one of the inherent problems that precipitated its demise.

This complexity often results in an inability to assure prospective employers in the critical negotiation stages of their eligibility to obtain location incentives. The failure to illustrate the overall costs and benefits associated with choosing Texas adds uncertainty (and, hence, risk) to the process. When coupled with an overall lack of competitiveness in the variety and magnitude of incentives, this situation exacerbates and reinforces other difficulties. This lack of flexibility and quantifiability is in sharp contrast to competing states and even most local areas in Texas, where definitive packages can be rapidly structured.

While Texas prides itself on being “business friendly,” this perception is not shared by site selection consultants and economic development decision-makers.

In particular, the notion that incentives represent efforts to raid the State Treasury rather than opportunities to prime the pump through investing in future growth must be dislodged. While it is beyond the scope of this report to evaluate all aspects of State regulations, significant efforts should be devoted to streamlining business requirements and bringing more certainty to economic development initiatives. Many competing states have eliminated thousands of regulations, and their inducement packages are often simple and easy to access. Keep it simple!

C. Back To Basics!

As discussed at length in the body of this report, many of the basic functions of government constitute the “fundamental” elements on which a viable economic development program is based. While it would take an even more ambitious effort to provide a highly detailed account in each of the categories, some general themes for future policy directions emerge.





1. Education

Texas must meet the challenges of a rapidly growing and demographically diverse population. Performance levels must be enhanced, dropout rates reduced, and college enrollments increased. The Texas Education Agency, Texas Higher Education Coordinating Board, Texas Workforce Commission, and other entities are developing concrete plans to improve educational opportunities throughout the state. **Texas presently lags other large states in most measures of educational attainment, which is a distinct competitive disadvantage.** A young and expanding population can be a marvelous resource for future development and a notable contribution to the tax base for generations, whereas an uneducated citizenry limits economic potential and leads to a strain on social service networks. Texas must enhance and adequately fund the ongoing initiatives to “close the gaps” in education and promote improvements in quality at all levels.

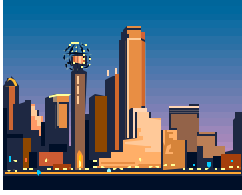
2. Environment

Texas has several urban centers at or near nonattainment status with regard to Clean Air Act standards. Compliance plans have been established, but the funding mechanism has been thwarted in a legal challenge. The state also faces other environmental concerns, including air quality and water quality and quantity issues. Compliance with applicable regulations is required to avoid significant penalties (including limitations on new facilities and a potential loss of federal highway funding), and ecological conditions in an area can materially impact its desirability and feasibility as a site for economic growth (particularly in certain technology sectors). **The state must adequately support efforts to meet federal mandates while promoting environmental quality within a predictable and common-sense regulatory framework.**

3. Tax Policy

Tax policy in Texas suffers from (1) significant issues with regard to the adequacy and fairness of public school funding, (2) disproportionate burdens on capital-intensive industries which constrain economic development, (3) a revenue base that does not expand in line with overall economic growth and fiscal requirements, and (4) relative complexity in administration. Several alternative mechanisms are explored in detail within the main text of this study. Overhauling the tax





system is clearly a massive undertaking fraught with political and economic landmines. Nevertheless, the state should begin moving at least incrementally toward a more proper system to meet long-term requirements in an effective manner. This process is likely to initially emanate from school finance, but its relative share of overall state and local spending is sufficiently large to merit comprehensive review of the entire system.

4. Transportation

Texas needs to ensure adequate transportation infrastructure to support future growth. The highway system is not keeping pace, and other modes are worthy of consideration. The state has recently established toll equity funding mechanisms and a mobility fund (as yet unfunded) to accelerate construction. While fiscal priorities must obviously be considered, **efforts to enhance mobility are critical to future competitiveness** and the ability to recognize trade opportunities throughout the state. The Trans Texas Corridor concept—a large-scale, multi-modal transportation program proposed by Governor Perry—and similar initiatives are potential avenues to optimize the use of financial resources for this purpose and to encourage effective public-private partnerships to accelerate development.

5. Communications

Communications is a cornerstone of social and economic progress. It has shaped the path of civilization for several millennia and will do so in the future. The **availability of state-of-the-art capability to support technological progress is essential** for the sustainable expansion of business activities in Texas. Broadband accessibility at affordable rates can redefine the viability of rural and border regions in Texas in terms of education, healthcare, feasible target clusters, and many other factors. Specific revenue sources are potentially available for such infrastructure, although not without controversy (see full report for a complete discussion). In any case, communications capabilities that meet or exceed those of other large states represent a key element of this fundamental aspect of economic development.





6. Electric Power

Texas has initiated an ambitious electric competition effort, which, despite the expected glitches associated with transition, is a model for other areas. The state also has a well-defined power grid covering about 85% of total usage and a surplus of power to sustain growth. Maintaining this system and adhering to a **consistent set of reasonable and straightforward guidelines can be a major source of advantage** to Texas in recruiting electricity-intensive industries. Ensuring adequate returns and predictability in the regulated “wires” (transmission and distribution) segment will further assure that sufficient infrastructure to transport power is maintained.

7. Healthcare, Insurance, Risk Management, and Judicial Reform

A prevailing theme in the research generated with this project is the importance of minimizing risk, reducing uncertainty, and improving predictability of economic outcomes. This topic has garnered significant attention in the wake of the 9/11 attacks. Obviously, much of this arena lies beyond the purview of government, and quite often, excessive public-sector involvement can do more harm than good. Nonetheless, there are ways to enhance the overall environment within the state in which firms engage in already risky competitive activities.

Greater flexibility and fewer mandates can reduce health and property/casualty insurance costs and enhance consumer choice. Eliminating any forms of rate discrimination or disparity that are not justified by actuarial experience can increase accessibility. Appropriate liability limits on mold and other emerging risks can encourage expanded availability of coverage. Judicial reforms in the area of malpractice can reduce healthcare costs, and similar reforms in other areas can positively affect affordability and risk management. Texas needs to take appropriate steps to ensure a framework conducive to investment and job creation and to encourage overall public health; at the same time, the state must avoid the temptation to employ rate caps and other artificial and ultimately counterproductive solutions which could undermine the basic structure within which business activity occurs.





D. Show Me The Money!

No matter how distasteful they may be in principle, monetary incentives are a fact of life in modern economic development. Viewed in the appropriate framework, they are an integral part of the “market” for new and expanded economic engines. There is certainly nothing new about economic incentives, and they are not without long-standing historical precedent in the Lone Star State. The first settlers who migrated to Texas from Mexico (the legendary “Texicans”) received free land and tax incentives as an inducement to inhabit this rugged territory. Based on the investigation underlying this report, a number of initiatives appear to be definitively **justified, viable mechanisms** to improve the state’s competitive position in the market for quality locations, expansions, and retentions. These areas are briefly discussed below (see full report for more detail).

1. **Create a Strike Force Capability or “Deal-Closing” Fund.** The designation of a discretionary pool of money to secure key incentives on an expedited basis for major projects represents one of the most significant opportunities currently facing Texas. Providing the Governor (possibly with input from a few others) the ability to deploy such revenues as part of an overall state and local government inducement strategy can be (and often is) the difference between success and failure. The Governor, as the primary spokesperson for the State, is a vital part of modern economic development and needs to have the flexibility to make things happen.
2. **Increase Existing Research and Development Incentive Programs.** Texas should raise the research and development tax credit to a higher percentage in order to be more competitive with other states in this critical area for future growth. The state should also allow the overhead allocation from university research grants to be used for the intended purpose, rather than being transferred to general revenue.
3. **Expand and Simplify the Investment Tax Credit and Jobs Tax Credit Programs.** Texas should (1) increase the level of credit associated with existing programs to a range more in line with other states, (2) eliminate provisions which make them difficult to





access, and (3) extend the coverage to the entire state, rather than limiting it to Strategic Investment Areas (SIAs)—areas designated for tax credits as a result of high unemployment and low per capita income. (The level of the credits could be somewhat higher in the SIAs in order to further encourage development in these regions.) The Investment Tax Credit is particularly important in order to offset the built-in penalties for capital-intensive firms in the current fiscal structure.

4. **Simplify House Bill (HB) 1200.** This measure, which was recently passed by the legislature, is a major advance in development policy because it directly affects the disproportionate property tax liability of capital-intensive firms. As long as the property tax as the primary mechanism to fund public education is maintained, a measure such as HB1200 (which caps for several years the taxable valuation of new investments meeting certain specific criteria) is essential for competitiveness. The process for using the program needs to be simplified, made more predictable, and implemented in a way that does not involve undue risks to the recipients or participating school districts. Such uncertainty can dilute and in some cases potentially eliminate the advantage to Texas of having this initiative.
5. **Maintain and Strengthen the Economic Development Sales Tax.** This program is the major competitive mechanism currently in place and is key to effective efforts by hundreds of communities. Some inappropriate uses have occurred and need to be corrected; training and education of those involved can be helpful in this respect. On the other hand, the permitted uses should be extended in areas which are clearly related to development and job creation.
6. **Develop a More Equitable and Competitive Taxation System for Inventories.** With continuing reliance on the property tax to fund public schools, a disproportionate burden falls on goods-in-transit relative to other states and leads to direct, quantifiable losses in business activity. Efforts to address this issue (while being cognizant of local fiscal needs) will bring important benefits to state business activity.





Programs such as those described above are the basis for competitive monetary incentives in the modern, global market for economic development.

E. Get The Job Done!

Workforce training is consistently viewed as one of the most important aspects of site selection. Evolving demographic patterns suggest that this factor will remain critical over an extended horizon. **Texas must complement its current Self-Sufficiency Fund and Skills Development Fund with a comprehensive, employer-driven program.** The pitfalls of the prior Smart Jobs Fund should be avoided by making the initiative outcomes oriented and otherwise strengthened. Given its experience and overall focus, it is probably best that the Texas Workforce Commission manage the program. It is important, however, that criteria be established which clearly define the proper objectives and evaluation criteria for the new program. It must be focused on site selection and business development rather than other social goals. Such an orientation is notably different from the existing programs within the state (which emphasize number of persons trained rather than specific employer needs), but is the proper approach to ensure competitiveness.

F. Find Me The Money!

Capital access is critical to a complete and successful economic development agenda. It is particularly important for small businesses, emerging technology sectors, and less advantaged regions of the state. Texas should use all reasonable means at its disposal to encourage private-sector lending and investment in the state. Moreover, various credit enhancement programs (linked deposits, reserve funds, etc.) should be enlarged. In fact, an Economic Development Bank to oversee and promote such efforts could be a substantial impetus to economic expansion in all parts of the state. Texas should also take appropriate steps to encourage incubators to spur new company startups, particularly in emerging technologies, as well as other mechanisms to expedite technology transfer.





G. Help From Above!

Federal programs to promote growth, whatever their merits, are available throughout the country. Texas can gain benefits in many areas by more effectively accessing these resources. Concerted efforts should be made to maximize the use of these external funds in such areas as, among others, research and development, job training, and community development. Such an initiative is critically important in the agenda supported by the Governor's Council on Science and Biotechnology Development (a group established to ensure a significant presence for Texas in emerging sectors), and is vital to maintaining competitiveness in many other areas. The state should also develop an aggressive strategy to ensure equitable treatment in the upcoming military base realignment process.

H. Sell It!

Marketing is an essential part of any competitive framework with differentiated offerings. Texas has a proven and highly successful program to promote tourism. It should be maintained and provided with sufficient resources to be more effective. Despite impressive achievements, there is substantial upside potential; a redefined set of consumer demands has surfaced in light of 9/11, and others states are increasing their promotional campaigns. Greater flexibility could better leverage funds to take advantage of cooperative endeavors and the benefits of the Internet in global reach. This plan is working; it ain't broke; expand it, but don't fix it. (Greater support of cultural endeavors can also have a positive effect on tourism and the overall economic environment.)

Texas must adopt a comparable effort to **market the state as a location for economic development and new activity**.

This effort should be of sufficient magnitude to reach key decision-makers throughout the world. As part of this program, international trade should be encouraged on a more comprehensive and systematic basis.

I. Focus It!

In order to effectively utilize state resources for maximum impact, **strategies should be focused toward clusters of production where Texas is presently competitive or has**





definitive prospects for success. This analysis identified fifteen such segments, although these will change over time as new market conditions and technologies surface.

J. Spread It Around!

Economic development strategies around the country have often proved to be more successful if implemented on a regional basis. The diversity of Texas makes it difficult to have a unified “one size fits all” program. On the other hand, local entities frequently lack the full set of prerequisites and tools needed to attract major prospects. Thus, for the purpose of the study, the twenty-four planning regions (COG regions) are used as the “unit of analysis.” An account of each of the areas is given in Appendix I, including targeted industry clusters for focused recruitment. Attention should also be given to geographic clusters such as inner cities, the border, and rural Texas with unique development needs.

K. Dance With Them What Brung Ya!

In the course of the complete study, frequent mention is made of “relocations, expansions, and retentions.” While there is a natural and almost irresistible tendency to emphasize on new facilities, it must be recognized that (1) most jobs are created by existing firms or new startups, and (2) maintaining current employers is a vital element of a stable economic base.

Some losses (such as the movement offshore of the apparel industry) are an inevitable byproduct of global integration or evolving technology; others can be prevented. Capital access programs and other initiatives to encourage reinvestment by current employers should be an integral part of the economic development process. This strategy should be implemented both in state eligibility criteria and in the training of local economic development officials.

L. Coordinate, But Don't Consolidate!

As noted earlier, numerous state agencies play some role in economic development. There are also myriad local entities and federal programs involved. It does not appear practical or prudent to combine all of these efforts under a single entity. In fact, **many segments of government have specific expertise in areas which impact business expansion prospects.**





On the other hand, there is a definitive need to coordinate programs in many situations. State-level marketing can interact with local governments to maximize efforts. In the selection process for major projects, it is often necessary to marshal inducements from multiple sources and governmental levels. An **information clearinghouse which fully spans all programs can also be invaluable** as a resource for companies, executives, site selection consultants, economic development professionals, elected officials, and other constituencies. An ability to pull things together efficiently and expeditiously can facilitate the expansion of opportunities and ensure that the Governor and other elected officials are involved at appropriate times.

Effective coordination of key facets of the economic development process is an integral part of achieving full potential. Nonetheless, total consolidation of disparate programs is not a productive approach.

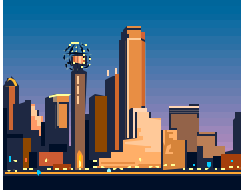
M. [Take It From The Top!](#)

In the contemporary environment, securing long-range prosperity involves multiple aspects of public and private activity. Competition has also reached unprecedented levels on many fronts. One result of these phenomena is an increased and more direct role for governors in economic development. As the chief spokesperson for their states, governors have become an integral part of both negotiations and structuring appropriate programs and packages. To be effective in this framework, Texas needs to (1) provide strike force capability on a par with key competitors and (2) more fully integrate the Office of the Governor into the entire development agenda.

N. [Keep Texas Economic Development!](#)

Texas Economic Development, the agency bearing the bulk of responsibility in this arena, is slated for Sunset review by the Texas Legislature and was the subject of some controversy regarding the demise of the Smart Jobs Fund. This study has examined programs in other states, reviewed functions and programs within Texas, and performed a broad-based assessment of the present and future of economic development in multiple contexts. These efforts have resulted in a clear, unambiguous and definitive conclusion that **Texas must maintain a department tasked with the most visible**





aspects of promoting business expansion and job creation. This activity should be closely integrated with the Office of the Governor. Because of the importance of this issue to the future of various programs within the state, it is the subject of a separate section within the full report.

III. Framework for the Analysis

There are two essential facets of economic development which are referred to in this report as “fundamental” and “incremental.” **“Fundamental” economic development incorporates much of what state government does on an ongoing basis.** Its essential premise is that the first requirement for economic success is an overall environment that is conducive to economic success.

The **other category of economic development activity undertaken by the public sector is “incremental” in that its purpose is to affect decision-making at the margin,** that is, to “close the deal.” These initiatives typically take the form of either explicit marketing efforts aimed at increasing business activity or some type of incentive to encourage locations; they represent what most people view as development policy. Because much of this activity involves the transfer of public resources to private firms in one form or another, incentive programs are often controversial. State policy regarding incentives typically represents a miniscule portion of fiscal resources relative to fundamental functions, but is nonetheless absolutely essential to ultimate success.

Overall costs and other fundamental factors are often approximately equal across several potential sites. Consequently, **although incremental incentives rank relatively low in decision factors on an absolute basis, they are almost invariably the difference between being on the “short list” and winning.** They are, in effect, “the last mile” in economic development.

As noted earlier, much of economic development policy is inseparable from the fundamental functions of government. It revolves around making the state a desirable place to be, with excellent educational opportunities at all levels, infrastructure to encourage and accommodate growth, a fair and equitable tax system, appropriate environmental standards, a balanced judicial system to resolve legitimate disputes, understandable





and common-sense based regulatory mechanisms, and a predictable framework to permit accurate assessment of and compensation for risks. The point is simply to create a business and quality-of-life climate that is conducive to prosperity and which makes Texas a desirable place to live, work, invest, and create jobs and economic activity.

In the contemporary context, such efforts are essential, but also are not enough. Location decisions which vitally impact long-range expansion and fiscal soundness are made in a market framework driven by considerations of costs and profitability. Incentives are a fact of life in that marketplace. Effective financial inducements, precisely targeted job training, and enhanced capital access are part of the supply and demand mix in site selection competition. As with any market where participants have differentiated offerings, advertising and promotion are part of the process. When public or private resources are invested in future progress, they should be directed in a manner which maximizes returns. If Texas is to win with some degree of consistency, Texas must first be in the game. Fundamental policy will get the ball inside the 20-yard line; incremental policy takes it over the goal line.

In fact, a variety of factors have coalesced in recent years to make incremental economic development efforts even more significant. First, **labor and capital mobility has greatly increased**. The result is that many elements of traditional costs have been equalized across the country (and, in some instances, the world). Second, **the site selection process has become more sophisticated**. Firms have come to recognize that they have significant “bargaining power” with state and local governments and are using it to effectively reduce overall costs. Third, **increasing globalization has brought greater attention to all aspects of costs**. In such an environment, even relatively minor variations in costs across geographic areas can be a key factor in location decisions, and incentives are an important part of the equation when areas are roughly equivalent in other respects. Fourth, **firms are now held to higher levels of public scrutiny in debt and equity markets** than has been the case historically.





Given these observations, it becomes readily apparent that **Texas must have competitive incremental initiatives** built around the following broad areas:

- ✓ competitive monetary incentives (tax reductions, site-specific infrastructure support, etc.) sufficient to be effective in head-to-head comparisons with other states and countries;
- ✓ competitive job-training mechanisms designed to reflect the specific needs of employers;
- ✓ marketing programs targeted at key decision-makers in the site selection process;
- ✓ focused industrial recruitment and retention incentives based on the relative strengths of individual regions but with an emphasis on the high-tech, high-growth emerging sectors likely to define US economic growth in the future as well as extensive commitment to research and development, technology transfer, and capital availability;
- ✓ expanded programs to promote the export of goods and services produced in Texas to major foreign markets;
- ✓ continuing and enhanced efforts to promote tourism and cultural pursuits within the state;
- ✓ cognizance of the importance not only of attracting new facilities, but also (1) retaining and expanding existing employers and (2) encouraging startups; and
- ✓ recognition of the diversity of the state and the need to accommodate disparate characteristics, opportunities, and limitations.

While it is correct to think of “fundamental” and “incremental” initiatives separately, they are not completely independent. In particular, elements of the tax structure (such as heavy reliance on local property taxes to fund public education) create the need for certain types of incentives that might not exist or be warranted in other jurisdictions.





IV. Texas' Position in the Race for Corporate Locations

While there is no doubt that the Texas economy performed extremely well in the past decade and has many assets to support future expansion, the glowing numbers mask a disturbing phenomenon related to the factors described above. **In the early to mid-1990s, Texas was the undisputed leader in the race for new capital investments, job growth, and new and expanding facilities. More recently, the state's position has dropped significantly.** Texas fails to appear even in the top ten when per capita measures are used for total new and expanded facilities, total capital investment, or total new jobs created. Other states have seen their positions improve; in most cases, proactive measures to enhance the business climate (such as tax cuts and other incentives) can be directly linked to success.

Texas Strengths and Weaknesses

Texas does not fare well relative to other states with respect to “the last mile” in economic development. As the benchmark comparisons with other large competing states provided in the full report illustrate, Texas lags other large states in direct incentives, employer-driven job training, marketing, and other key areas essential to attracting business locations. One major study concluded essentially that Texas is not on the radar screen when it comes to industrial site selection incentives. The state has a reputation for not being able to meet the marketplace in terms of programs that impact decision-making; similarly, the state's marketing efforts are not sufficient to inform prospective firms and site selection specialists of the favorable aspects of the economic climate within the state. On a more positive note, Texas is generally viewed as a desirable place to live and work, often ranking at or near the top of performance surveys. Nonetheless, the state has seen a marked deterioration in recent years in new locations and related measures in absolute, relative, and per capita terms.

This pattern is occurring within an overall economic environment that is rapidly changing in ways that have significant implications for long-range prosperity. First, while many traditional industries remain important, particularly in some regions, the US is clearly finding its comparative advantage in high-tech, high value-added sectors





characterized by a notable amount of intellectual capital. It is unlikely that low-wage manufacturing is going to remain viable domestically, irrespective of any incentives, due to the competitive realities of a global marketplace. **Texas, to be effective, must be focused on both current and future technologies.** This approach requires outstanding educational performance, specific and targeted job training initiatives for skilled technical workers, efforts to ensure access to early-stage financing, and other technology transfer mechanisms.

Second, much of the market for the future output of this country lies in other parts of the world. It is thus an indispensable element of national policy that the potential for free trade be expanded. At the state level, **efforts to promote exports must be a part of an overall strategy for growth.** Texas has achieved impressive gains in international activity in recent years. Spurred by outstanding seaports and major airports, a lengthy border with Mexico as the benefits of the North American Free Trade Agreement have surfaced, and an excellent mix of goods and services in demand throughout the world, the state almost tripled its exports in the 1990s. Maintaining and expanding this global presence to other regions (almost half of current trade is with Mexico) is essential to enhanced economic performance.

Within this external framework, Texas brings many characteristics which shape its economic development agenda. The state saw a population increase of about 4 million residents (more than 22%) during the 1990-2000 decade. Both natural expansion (births exceeding deaths) and in-migration contributed to this rise, and the pattern (at a somewhat lower rate) is projected to continue well into the future. The state has the youngest population in average age of the ten most populous states, with birthrates, average family size, and average household size all well above national norms. The demographic patterns in Texas reflect in large measure the rapidly growing relative importance of the Hispanic population, particularly in South Texas and the border region.

The unique patterns in the Texas population have a profound influence on economic performance. On the one hand, a continuation of current trends in education and earnings by ethnic groups leaves the state with daunting challenges and the prospect of declining living standards and per capita





incomes. On the other hand, **a young and growing labor force can be an enormous asset in attracting new activity, particularly as the aging “baby boom” generation begins to retire and a shortage of skilled and experienced workers persists.** The situation can be viewed as “good news” or “bad news”—a challenge or an opportunity—but it definitely shapes the proper direction of policy. Overall, the availability of people to contribute to the economy is clearly positive; equipping them to do so effectively is a necessity.

Other strengths of the Texas economy include its location, climate, heritage, infrastructure, favorable costs in several categories, concentration of production in areas likely to foster growth and diversity, and endowments of key resources and assets. Texas also has advantages related to some important elements of cost. **Housing and real estate are less expensive than in many competing markets, as are construction costs, transportation costs, power costs, and wage rates.** Although rankings vary across individual categories and states and are different depending on the specific needs of each sector, Texas is generally competitive with regard to basic operating costs.

In many instances, the weaknesses in the Texas business complex are closely related to the basic strengths. The state has a large potential workforce, but school achievement is less than ideal. Dropout rates are high, and other performance measures lag competing areas (although the situation appears to be modestly improving). Texas also has a widely-publicized crisis in its school finance mechanism and must cope with ever-expanding enrollments and demographic challenges.

Texas has excellent infrastructure, but lacks sufficient resources to maintain and extend it rapidly enough to meet ongoing needs. The result is reduced mobility, increased congestion, and challenges in maintaining adequate air quality. The tax burden within the state is generally well perceived (particularly the absence of a state personal income tax), but falls disproportionately on capital-intensive firms which are critical to continuing prosperity. Moreover, the state faces significant budgetary constraints in its ongoing efforts to meet the needs of a growing population and enlarged production capacity, and the tax structure is not well suited to bring increased revenues concomitant with spending requirements. While Texas has an exceptional





cultural heritage, its public commitment to the arts is well below that of other large states. In fact, the lore and image of the past is a key factor in the desirability of Texas as a tourist site.

As noted earlier, **Texas severely lags most other states in its dedicated programs to attract new industry, secure expansions, and retain current employers.** These incremental economic development initiatives include tax incentives and other monetary inducements as well as targeted job-training mechanisms. Furthermore, despite the widely-recognized success of a tourism promotion campaign over many years, there's no comparable level of effective marketing of Texas as a destination for business activity. The result is that the state has fallen behind in key measures of success in corporate expansion and has lost important opportunities to other states. Many of these losses are occurring within firms and sectors that have been sources of strength for Texas in the past.

The sheer **diversity** that gives the state much of its strength is also a source of substantial challenge. While impressive growth has been observed in recent years in many parts of Texas, much of the rural segment not adjacent to urban centers is experiencing loss of population and a deteriorating economic base. Similarly, the Texas-Mexico border region enjoys remarkable growth by some measures, yet endures living standards well (and increasingly) below state and national averages. Inner cities of large metropolitan areas face notable obstacles as well. Addressing these concerns requires considerable effort over the next several years.

V. An Evaluation of Existing Economic Development Programs Within the State

A. Economic Development Sales Tax

By far the most lucrative economic development program in Texas at present is the local option Economic Development Sales Tax. It is, in fact, the only pool of resources that keeps Texas remotely competitive with other large industrial states.

More than 400 communities have enacted the Economic Development Sales Tax since its inception in 1989, and it now generates hundreds of millions of dollars annually. It has



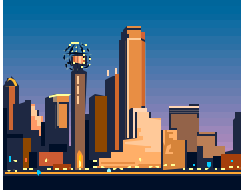


brought many benefits to Texas. Specific cities point to dozens if not hundreds of new businesses that have been induced to locate by the incentives made possible by the sales tax program. It has also allowed many areas to establish and maintain ongoing economic development operations staffed by experienced professionals. TPG and others have analyzed the outcomes in communities where the programs have been in effect for several years, and have found rates of return, investment per permanent job, and other measures to be generally positive.

As would be expected in such a diverse, locally-administered program, the Economic Development Sales Tax has not been without its detractors and difficulties. Some cities which fit the size criteria are ineligible to participate due to prior commitments of sales tax proceeds to other purposes (such as hospital districts), and others have opted not to enact the tax. The result is a pattern of “haves” and “have nots” defined by the availability of these revenues to pursue business opportunities. Other, larger cities have asked for an opportunity to adopt the tax, although many of them are already at the rate ceiling or have other revenue sources available.

There has also been concern, some of it justified, regarding the manner in which the resources have been deployed. Some (though not many) communities have evidently used the funds inappropriately, particularly during the recent economic slowdown when budget shortfalls led to these revenues being deployed to meet objectives and requirements other than economic development. There have been other occasions when the wisdom of individual outlays can be questioned, and at least one city rescinded the program. Training is now mandated and ongoing for economic development corporations administering the tax proceeds, which should minimize future difficulties. In many instances, concerns reflect a simple misunderstanding of the economic development process or a mistaken belief that enacting the tax will automatically and immediately spur business expansion. Still others have found that Texas cities compete against one another with these resources. There is no doubt some truth to this assertion, although there are almost inevitably locations in other states under consideration at some stage of the process. In any case, only one of the affected communities will ultimately deploy the funds in each





instance, and any decisions regarding incentive offers within allowable guidelines should be left to local officials.

It may well be that the economic development sales tax programs could benefit from some minor “tweaking.” Clearly specifying common activities that are not permitted could avoid confusion and misallocations in the future. It might also be beneficial to expand the eligible usage in other areas. As examples, competitive marketing or contributions to more general infrastructure (which would potentially allow greater use of State funds and toll collections) could be effective ways to enhance and magnify local development efforts. Expanding the range of eligible communities might also be considered. In any case, realistic analysis of the “numbers” and discussions with a variety of constituencies make it apparent that continuation of this program is absolutely essential to the future competitiveness of Texas.

B. [Property Tax Abatements and House Bill 1200 \(The Texas Economic Development Act\)](#)

Another common incentive at the local level is the abatement of property taxes. This incentive has been around for decades and is quite widely used throughout the country. Typically, the relevant city, county, community college district, and other taxing entities grant a full or partial abatement of property tax obligations for a specified time period. Over the past decade, school districts have generally not been included in the abatements process in Texas. This phenomenon emerges from the fact that abatements granted by school districts do not offset the taxable wealth base used to determine state aid to public education in the district.

This provision was expressly designed to discourage the use of tax incentives at the expense of resources for school finance and to eliminate a situation in which the state indirectly subsidized school districts in a disproportionate manner not tied to explicit public policy objectives. The goal of preserving a larger total funding base for public education is certainly laudable, yet this provision severely hinders the ability of Texas to attract major capital-intensive facilities. Because of the heavy reliance on local property taxes to fund education, it is typical that school levies are by far the largest component of property tax liabilities. Thus, abatements which exclude these amounts within a framework of excessive dependence (and correspondingly high rates) creates a





situation in which traditional abatements are relatively less valuable in Texas than in other areas, thus minimizing (though certainly not eliminating) their value as an incentive.

During the 2001 legislative session, the Texas Economic Development Act (House Bill (HB) 1200) was enacted to partially address this imbalance and the associated inability to attract large facilities. In particular, this measure limited the taxable value of a property for a period of eight years if it (1) meets certain size, job creation, and wage rate parameters (which vary depending on the magnitude of the investment and certain characteristics of the school district) and (2) reflects a major expansion in manufacturing, research and development, or renewable energy. It also contains provisions which ensure that the school district is not penalized for granting this valuation ceiling, although in practice that concept is proving difficult to administer in the current structure of the Act. Thus, under the bill, companies continue to pay property taxes to support local schools, but at a rate allowing them to be competitive with facilities in other states. As an example, a typical semiconductor plant with a \$1 billion investment would save enough over time to eliminate cost disadvantages documented by the industry, yet still pay millions of dollars to support local schools—a classic “win-win” situation.

In an effort to measure the potential long-range benefits of the **Texas Economic Development Act**, two scenarios were postulated which involved varying assumptions regarding number of projects attracted. In the most conservative case, the effects of the ongoing investment process include \$35.0 billion in annual Total Expenditures and 218,864 Permanent Jobs. Under a slightly less conservative scenario (still likely to understate overall benefits once the program is fully implemented), the ongoing operations of the facilities locating, expanding, or modernizing in Texas as a consequence of the Texas Economic Development Act yield yearly effects of \$52.6 billion in annual Total Expenditures and 328,297 Permanent Jobs. Moreover, the state would receive an additional \$1.233 billion per annum (by the 10th year) in fiscal revenues from the healthier rate of expansion. Thus, it is readily apparent that **the elimination of a substantial imbalance in the competitiveness of the Texas tax structure will, even under conditions of modest success, be a major catalyst to future development.** (This analysis is described in much more detail in the full report.)





C. Tax Credits for Research and Development (R&D), Job Creation, and Investment

The promotion of R&D is critical in order to be viewed favorably relative to other large industrial states.

Presently, at least 20 other states have adopted legislation to encourage this activity, including most of the larger areas that typically vie for high-tech locations. If the R&D credit results in a single, large, high-tech location moving to the state (measured by the average size of such facilities developed during the 1990s), the gains to Texas from this provision of Senate Bill (SB) 441 (a measure enacted in the 1999 legislative session which established several categories of moderate tax credits) include more than \$1.21 billion in Total Expenditures and 12,512 Permanent Jobs. The desired outcome, of course, is that the credit contributes to a long-term program in high-growth, emerging sectors.

Unfortunately, the magnitude of the Texas program is far less than those available in other areas, thus limiting its overall effectiveness.

Job Creation Tax Credit for Strategic Investment Areas

Senate Bill 441 created a franchise tax credit for job creation in Strategic Investment Areas for businesses engaged in agricultural processing, central administrative functions, distribution, data processing, manufacturing, R&D, and warehousing. Although there are specific parameters and limitations on the credit's use, it is expected to have a significant effect on the overall level of job creation, particularly in Strategic Investment Areas. In fact, TPG analysis indicated the overall stimulus to business activity from this measure as of 2004 to be approximately \$3.00 billion in annual Total Expenditures and 15,637 Permanent Jobs.

Investment Tax Credit for Strategic Investment Areas

SB441 further contains a tax credit for qualified capital investments of a minimum of \$500,000 in an amount equal to 7.5% of the investment. The credit is given in five equal amounts over a five-year period, may not exceed 50% of the franchise tax due, and is limited to counties qualified as SIAs or agricultural processing investments in counties of less than 50,000 population. Based on the requirements of this provision and its fiscal note, the increases in business activity generated by this modest Investment Tax Credit are, as of





2004, expected to reach \$166.6 million in annual Total Expenditures and 864 Permanent Jobs. These gains will be concentrated in the least advantaged areas of Texas.

Synopsis

The tax credit program in Texas is certainly important in principle and likely to generate substantial benefits. However, the program in Texas is, quite frankly, inadequate in the current environment. The magnitude of the R&D credit is not sufficient to attract major programs in emerging industries. Similarly, the jobs credit and particularly the Investment Tax Credit must be more extensive and apply to the entire state to be realistically competitive. The goal of encouraging development in economically challenged areas can be achieved by offering somewhat larger incentives than those available statewide. It must be recognized, however, that some of the most desirable corporate locations are unlikely to opt for the Strategic Investment Areas. In fact, the greatest shortcoming of SB441 is that it failed to provide a mechanism to target major capital-intensive facilities.

This weakness is overcome to some extent by HB1200, particularly if some of the cumbersomeness and uncertainty can be removed. The disproportionate burden on large plants stems both from the reliance on property taxes to fund public education and a franchise tax partially tied to capital asset values as the primary source of business revenue to the state. HB1200 has the potential to address some of the issues; a substantial Investment Tax Credit would address the other. Given the intensely competitive environment in attracting high-tech plants, both are needed. In summary, the difficulties with the SB441 tax credit initiatives are not conceptual; the **credits simply need to be increased in magnitude and extended in geographic coverage.**

D. Job Training

Texas recently allowed its "Smart Jobs" Fund (SJF) to lapse in the aftermath of problems in its performance and administration. This left the state without an employer-driven training program. Texas maintains a Skills Development Fund which provides grants to community and technical colleges to meet local workforce-training needs. This fund is administered by the Texas Workforce Commission and is generally well regarded. Average training costs are modest





(about \$1,000 per worker), and placement rates are generally positive. This program is not sufficiently targeted and focused toward major corporate locations, however, to be competitive nationally as a tool for economic development.

Job training is of vital importance in vying for expanded business activity. It is also of particular significance to Texas because of (1) a rapidly growing and young population and (2) graduation and dropout patterns that are disturbing. Texas has the raw material to be a global leader in skilled workforce availability, but currently lacks the program capabilities to make it happen. Given these facts, it is worthwhile to explore this issue and its overall framework in some detail.

The State's Role in Training

There are compelling reasons for the State to play a major role in the training of Texans. State government represents a natural and logical entity to coordinate and facilitate various efforts. In addition, funding is a key aspect of this involvement. While there are federal and local funds available, a key component of the workforce training and education system must be paid for by the state. There is no doubt that Texas must offer a well-conceived system of training in order to be competitive. In fact, 45 states, including the major contenders for most large industrial locations, have such programs, many of which are highly regarded by corporations, site selection consultants, and the impacted workers.

Traditional workforce development typically involves addressing two broad challenges: (1) meeting widespread skill shortages to avoid any future economic decline while encouraging growth, and, at the same time, (2) providing the skills many workers lack so they are able to obtain and hold jobs with adequate compensation to make them self sufficient. In recent times, training availability and related grants have surfaced as important economic development criteria. With demographics leading to a tightening labor pool and skill requirements increasing, the availability of skilled workers and effective training are often the most critical factors in choosing a location.

It should be noted that an exemplary, employer-driven workforce-training initiative is but one piece in a very large puzzle. It is, however, an essential piece. Human capital is





the cornerstone of the modern technological business landscape. If properly developed, a growing working-age population will fuel the Texas economy for years to come, in much the same way that fertile soil and mineral deposits did in earlier times.

As the economy continues to evolve toward technology-based production methods and business solutions, required skills levels are rising in many occupations. This trend is expected to continue. The dynamics of today's global marketplace are also putting pressure on many workers to retool their skills in order to remain viable employees. An effective program should be outcomes oriented with well established criteria which meets the needs of prospective firms. The absence of such an employer-driven, job-training mechanism is a significant disadvantage to Texas as a site for desirable facility locations.

E. Capital Availability

One of the greatest impediments to economic growth in the US (and around the world) is the availability of financing for entry-stage companies and small businesses. Texas has been relatively successful in attracting capital from outside sources in recent years. However, **as a large, diverse state that does not headquarter a major national banking organization, Texas lags significantly behind many other parts of the country with regard to its loan-to-deposit ratio** (not a completely accurate measure, but indicative of underlying difficulties).

Although the issue of capital availability is quite complex, the following basic policy initiatives merit consideration:

1. Encourage greater disclosure from financial institutions competing for public (state and local) deposits.
2. Consider local lending practices as one evaluation factor when deciding where to deposit public (state and local) funds.
3. Apply greater "moral suasion" by widely disseminating the publicly available information regarding lending practices.

A missing weapon in the arsenal of Texas is a substantial program to encourage seed capital and venture capital for new industry development. Such programs are





important to small areas that must generate much of their growth from within, but it is equally important in fostering the development of high impact, emerging technology sectors. The Governor's Council on Science and Biotechnology Development has identified this factor as an essential element in an effective strategy for successfully attracting these critical engines of future growth.

In summary, while Texas has generally attracted capital for the better part of two centuries, there are critical issues of access which can markedly impact growth prospects. To be competitive, the state needs to enhance its role in this area. The creation of a high-profile state Economic Development Bank to provide a more extensive program of credit enhancements, linked deposits, direct loans, or other programs using appropriate financial criteria could enhance the viability of existing programs and promote more flexible and innovative strategies to pursue job creation and retention opportunities. This approach can also be implemented in a very cost-effective manner. (Several modest existing programs are described in the full report.)

F. Inventory Taxation

Unlike neighboring states, Texas generally includes inventories in transit within the state in the property tax base of local governmental entities. This lack of competitiveness in a key component of the supply chain imposes substantial economic losses on the Texas economy, thus preventing the achievement of its full potential.

Even under a conservative set of assumptions, the inventory tax policy of Texas is shown to have substantial adverse consequences for overall business prosperity. These losses are estimated to include \$236.7 million in direct income and 5,978 direct jobs. Accounting for the multiple rounds of spillover activity also foregone, losses rise to \$1.233 billion in annual Total Expenditures and 11,336 Permanent Jobs.

If Texas warehousing performed at the average level of the surrounding states, the net direct gains would be \$540.1 million in income and 13,643 jobs. The economic impact of this loss on activity is \$2.814 billion in annual Total Expenditures, \$43.6 million in annual State Fiscal Revenues, and 25,871 Permanent Jobs. This issue needs to be





addressed, with appropriate consideration for the impact on local government resources.

G. The Missing Link: Strike Force Capability

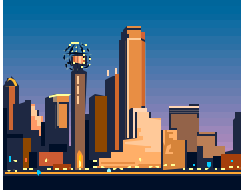
One other initiative which Texas is totally without and which is becoming increasingly important is what is typically termed a “strike force” capability or “deal closing” fund. This mechanism is nothing more than a sum of money earmarked for use by the Governor (perhaps with the joint consent of some small group of other key officials such as the Lieutenant Governor, Speaker of the House, and Comptroller) in a discretionary manner in negotiating with large-scale potential employers. The purpose of such a fund is to permit some decisions of a reasonable magnitude to be made quickly without having to be the subject of bureaucracy, delays, or uncertainty. Examples might include some type of infrastructure (such as an exit ramp from a highway), focused job training for startup, modest environmental remediation, or any other required investment.

The critical nature of this capability stems from (1) the rapid pace of decision-making in some site selection processes and (2) the inability to completely anticipate all potential needs and create seamless and comprehensive access to responsive approaches. This situation can be particularly valuable in Texas where the legislature is only in session five months each biennium. While measures have been approved in a timely manner by wide margins in a few instances where substantial projects were at stake, flexibility is often required on a continuing basis during the interim months when the legislature is not in session. Texas is also confronted with the fact that virtually all significant competing states now have such a process, thus putting Texas in the position of often saying “maybe” while competitors can immediately and with certainty say “yes.” This type of program is and has been so common in the past few years that site selection consultants and prospects take it for granted. Similar capability is an essential element of any credible and competitive economic development program.

H. Synopsis

While incentives may not be particularly attractive in principle, they are an essential aspect of the contemporary quest for sustainable economic growth. Informed and sophisticated





firms in a global marketplace work aggressively to improve their profitability. One established mechanism is to minimize the costs associated with major new facility investments and subsequent operations; inducements from areas seeking aggressively to attract locations and jobs thus become a fact of life. The fundamental functions of government are essential to creating the desirable framework to be a meaningful competitor for business expansions and locations. Nonetheless, the “incremental” sweeteners are essential to ultimate success.

Texas has numerous incentive programs to meet a variety of needs. Some are aimed at assisting small businesses or disadvantaged areas; others are designed to attract and retain major employers; still others seek to encourage research and development and other initiatives suited to gaining a significant presence in emerging high-growth sectors. (In addition to the elements discussed above, several zone, grant, credit enhancement, loan, and other initiatives are described and evaluated in the main text of this study.) Unfortunately, a long-standing bias against such inducements and a fiscal philosophy and measurement approach that fails to account for full dynamic benefits to the economy (and fails to recognize that while unused incentives from unsuccessful efforts may have no immediate adverse fiscal impact, they also have no long-term positive effect on prosperity) has resulted in a non-competitive development agenda. Many basic incentives are funded at levels only a fraction of those found in other large industrial states, and some are missing entirely from Texas’ portfolio of inducements. Despite current budgetary constraints, it is imperative that Texas take the necessary steps to buy a ticket to the dance. To do otherwise is to put the state on a permanently lower growth path than justified by its underlying assets, resources, and potential.

VI. Marketing Texas for Economic Development

A key aspect of an effective and comprehensive program for promoting long-term growth is an effective marketing effort. Much as campaigns to promote tourism focus on reaching potential visitors and conventions, economic development strategies must reach prospective firms, site selection consultants, senior executives, and others who notably impact the location process. Many states have very successful, well-funded marketing systems. While such promotional efforts do





not in and of themselves recruit new activity, they increase awareness of the state and its strengths and help to generate leads and “deal flow” for the state as a whole. Thus, they complement and extend local recruitment initiatives, which often depend directly on available opportunities. This segment of the complete report examines tourism promotion and business development strategies. This investigation reveals the virtual requirement for both a more flexible and comprehensive tourism program (although the current efforts have performed quite well) and an extensive marketing effort aimed at corporate locations, trade opportunities, and other potential job creation prospects.

One of the most significant aspects of successful economic development is a steady flow of leads to pursue. Although the total number of locations around the country has risen markedly in recent years, the opportunities for Texas communities have not expanded accordingly. Site selection consultants and economic development professionals report that the state is often not seriously considered, due to both non-competitive incentives and the fact that Texas is not “top-of-mind” with those who often drive the site selection agenda. The potential inducements that might be offered were addressed above. The second issue comes down to one basic item—marketing!

Another important marketing element is trade promotion. TxED sponsors trade missions to various countries. Much of this activity can be funded privately, as firms obtain direct benefits from expanding the market for their goods and services. State support is required in coordination, promotion, and other activities aimed at providing value to participants. These initiatives should also be expanded to diversify the range of countries with which Texas has substantial volumes of commerce. While companies within the state have some level of trade with more than 200 countries, there is a very high concentration of this activity in North America.

A study by The Perryman Group revealed that almost two-thirds of the new jobs created in Texas in the decade following the oil and real estate crises were directly or indirectly tied to expanding international trade and the global economy. Much of this impetus was derived from substantial gains in activity associated with Mexico and the emergence of the North American Free Trade Agreement. While these factors are likely to foster additional growth in the





future, the pace will not be as rapid as these relationships mature. When this market reality is combined with an increasingly integrated world, it becomes apparent that Texas can only reach its full potential through an aggressive global presence.

VII. Focused Industrial Recruitment

While any viable prospects for desirable activity should certainly be vigorously pursued, the industrial recruitment process must be focused. The rationale is simply that resources are limited and must be deployed in a manner to optimize prospects for success. The process of identifying appropriate targets involves (1) extensive empirical analysis to determine the resources and linkages which point to probable success and (2) detailed industrial evaluation to access those sectors with sufficient growth potential to merit recruitment. In order to be a viable candidate for long-term expansion, a sector must be characterized by both an appropriate match with the structure and resources of Texas and at least moderate prospects for new and expanded facilities.

While the clusters described in the full study are not the only areas of potential growth, they represent sectors which offer the best promise of success. When developing marketing strategies, attending trade shows, planning international trade missions, or visiting key corporations, it is helpful to focus on the industries offering genuine opportunities.

In some circumstances, regional development strategies are superior to purely local ones, and the COG areas are remarkably well defined and institutionally suited to this purpose. When thoughtfully constructed, regional plans and programs bring notable benefits to local taxing entities and groups. (Appendix I provides a profile of each planning region, including targeted industry clusters.)





Summary of Target Industry Clusters by Planning Region												
	Emerging Biotechnology & Medical	Emerging Nanotechnology & Materials	Electronics	Information Services	Applied Technology	Corporate Headquarters	Business Services	Tourism	Distribution, Transportation, & Logistics	Heavy Construction	Energy	Petroleum Refining & Chemical Production
Panhandle				X				X	X	X	X	
South Plains	X			X				X	X		X	
North TX			X	X				X	X	X	X	
North Central TX	X	X	X	X	X	X	X	X	X		X	
North East TX				X				X	X	X	X	
East TX	X			X				X	X	X	X	X
West Central TX				X				X	X	X	X	
Upper Rio Grande			X	X			X	X	X		X	
Permian Basin				X				X	X	X	X	
Concho Valley	X			X				X		X	X	
Heart of Texas				X				X	X	X		X
Capital	X	X	X	X	X	X	X	X	X			
Brazos Valley	X			X				X		X	X	
Deep East TX								X	X	X	X	
South East TX				X				X	X	X	X	X
Gulf Coast	X	X		X	X	X	X	X	X	X	X	
Golden Crescent				X				X	X	X	X	
Alamo	X			X		X	X	X	X	X	X	
South TX				X				X	X	X	X	
Coastal Bend	X			X				X	X	X	X	
Lower Rio Grande Valley	X			X				X	X	X	X	
Texoma			X					X	X	X	X	
Central TX	X			X				X	X	X		X
Middle Rio Grande				X				X	X		X	

*Clusters were selected on the basis of industry linkages and cluster analysis, occupational workforce requirements and availability, support requirements, and an evaluation of future industrial prospects.

VIII. The Role of Texas Economic Development

The optimal role for Texas Economic Development in stimulating long-range growth appears to rest on the following functions.





- Continue to administer the state tourism campaign;
- Market Texas as an industrial location;
- Coordinate foreign trade expansion efforts;
- Coordinate economic development efforts;
- Serve as a super clearinghouse for economic development initiatives;
- Promote economic development assistance to include individual areas; and
- Assist in program administration and approval.

These functions should be fully coordinated with the Office of the Governor. This list does not purport to be comprehensive, as there are other functions that a lead state agency in economic development could effectively perform. TxED is an ideal vehicle to maintain the level of awareness, information, and assistance needed to be competitive in the current environment.

IX. Conclusion

Texas has a long and proud history and heritage. Over the years, it has weathered many challenges to provide citizens across a vast territory with opportunities, often being a national leader in economic growth. It has survived wars, depressions, droughts, hurricanes, oil busts, bank failures, real estate debacles, and a hundred other calamities only to emerge stronger and more diverse. If the Lone Star State is to continue that record of achievement into the new century, it must adapt to global integration, rapidly evolving technology, and fundamental changes in the industrial framework to assure success. Texas has a legacy of responding to change. Its resilience and resolve will be thoroughly tested in the coming years, but, if past performance is any guide, it will ultimately be successful.

Respectfully submitted,

M. Ray Perryman, President
The Perryman Group



Texas, Our Texas:

An Assessment of Economic Development Programs and Prospects in the Lone Star State



I. Introduction

Pump jacks extracting barrels of crude from stubborn terrain. Sophisticated microchips rolling out by the millions. Ships moving tons of cargo in and out of deepwater ports. Small-town crowds in a Friday-night football frenzy. Test flights of the latest military aircraft. Trees laden with citrus. Legendary peaches, cantaloupes, and onions springing forth from fertile land. Cellular phones in massive quantities en route to emerging nations around the globe. Giant wind farms generating electric power in remote areas. Tourists sweltering in the summer heat in theme parks and along Gulf Coast beaches. Bridges bustling with the ebb and flow of exploding trade with Mexico. Cattle grazing in wide-open spaces, appearing on the surface much as they have for centuries. Pathbreaking discoveries and lifesaving procedures at major medical facilities. Crowded marinas at recreational lakes on a sunny Saturday afternoon. Jumbo jets from all parts of the globe taking off and landing with monotonous regularity.

These and myriad other images provide glimpses of the modern, complex Texas economy. In a remarkable odyssey of almost two centuries, a rugged and remote frontier outpost named for one of its many native tribes has been transformed into a major center of high technology and international commerce. From cattle to cotton to oil to electronics, Texas has repeatedly reoriented its business complex to meet evolving needs and circumstances.

Much of the colorful economic history of the Lone Star State can be written in terms of rich endowments of natural resources. Wild herds of horses and cattle once roamed the state, forming the initial base for survival and prosperity. Virgin soil provided yields of cotton and other crops which far exceeded those of the exhausted lands of the Old South in the post-Civil War era. In the early 20th Century, several major oil discoveries and the corresponding demand from automobiles and airplanes introduced a new engine of prosperity. The state picked up additional key sectors along the way, including defense manufacturing and healthcare, but petroleum remained dominant until the market downturn of the early 1980s (and remains so in some parts of the state).





After weathering the extreme turbulence in energy, financial services, and real estate which defined much of the 1980s, Texas emerged in the 1990s with a strong and vibrant economy. The state exceeded national norms in all major performance indicators and created new jobs at an impressive pace. Much of this growth was due to the development of a substantial presence in microelectronics, computers, telecommunications equipment, and other technology sectors over the period from the mid-1980s to the mid-1990s. This rapid conversion from an economy of the ground to an economy of the mind was accompanied by an expanded role in global trade (particularly related to the North American Free Trade Agreement—NAFTA) and further benefited from a record period of domestic prosperity.

As Texas prepares for the future, there are many challenges (and opportunities). The past year has brought a notable slowdown in business activity. The causes include, among others, (1) a domestic and global slump (especially in Asia and several emerging countries) dampening the demand for microelectronics, telecommunications equipment, and other manufactured goods; (2) the impact of the September 11 attacks on airlines, tourism, and other significant sectors within the state; (3) the adverse wealth effects associated with the dot-com collapse, the demise of several energy trading companies, and other equity market disruptions; and (4) an enduring drought of record proportions. This weakness, coming on the heels of a decade of remarkable progress, has led to increased dialog and efforts to proactively promote business expansion. The Governor has established a Task Force on Economic Growth to make recommendations, and several major trade and professional organizations are advocating pro-growth approaches to public policy. The Governor has also created a Council on Science and Biotechnology Development to focus specifically on emerging sectors with substantial technology and scientific components.

During the 2001 legislative session, Texas lawmakers enacted House Bill 931 which provided for Texas Economic Development (TxED), the State's tourism and business development agency, to prepare an economic development plan. This effort is designed to ensure an ongoing process of evaluation and to serve as a guide for public policy regarding the competitiveness of Texas for future opportunities. While other notable work has been accomplished in this regard, it has tended to be sporadic and, thus, unable to fully reflect the





dynamic and ever-changing nuances of the economic development process.

At the request of TxED, The Perryman Group, an economic research and analysis firm based in Texas, agreed to prepare this analysis on a *pro bono* basis. The objective in this undertaking is to bring to bear in a comprehensive and systematic matter the benefits of two decades of experience in economic development, site selection, public policy, globalization, industry analysis, technology, demographics, forecasting, marketing, and related areas. The involvement also brings access to an extensive set of models and databases specifically developed to reflect the unique characteristics of Texas and its regions. The Perryman Group developed and has maintained for the past twenty years the Texas Econometric Model, the Texas Multi-Regional Impact Assessment System, the Texas Industry-Occupation System, and numerous other integrated systems to permit comprehensive evaluation of all aspects of state business activity.

Initially, the basic framework for the evaluation is established. This discussion is followed by a description of the methodology used in this study. The report then focuses on key issues in Texas which form the backdrop for specific economic development efforts. These fundamental areas of concern reflect many of the basic functions of state and local government. Incremental programs to enhance visibility, support job creation, and increase overall competitiveness are then addressed. This segment includes an overview and evaluation of many existing programs and identifies gaps in current offerings. It also focuses briefly on strengths and weaknesses of Texas with respect to economic development. This assessment will include a general identification of potential target industry clusters to assist in the allocation of scarce fiscal and human resources.

Because much of the activity associated with securing new and expanded business growth is inevitably local in nature, a brief discussion of regional factors is also provided (a profile of each of the twenty-four designated planning regions in Texas, including industry clusters, and the associated Metropolitan Statistical Areas (MSAs) is given in Appendix I). Moreover, because some areas of the state—such as the Texas-Mexico border, rural Texas, and inner cities—face unique challenges, they are referenced at appropriate points





throughout the narrative. The study then offers recommendations for the state's economic development programs, including specific findings regarding the appropriate role for TxED. Through this endeavor, it is intended that a process can be established which provides Texas with an ongoing review of economic development endeavors, with the goal of being on the "cutting edge" of programs to ensure long-term expansion and prosperity.

II. Basic Framework of the Analysis

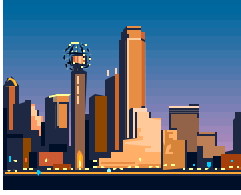
Before proceeding to the details of the analysis, it is useful to establish the broad framework in which this evaluation may reasonably occur. It begins with what may seem like an overly simple and obvious statement, but one which is basic to the task at hand: economic development is not easy. Competition is intense; prospects are sophisticated; strategies are complex; and outcomes are uncertain. While difficult, economic development is also essential. In the fast-paced global economy of the new millennium, the fortunes of states and their individual communities change rapidly. Old industries are replaced or transformed by new technologies as emerging sectors enjoy rapid growth. In such an environment, technologies once considered new are on the verge of becoming commodities. Texas must proactively strive to maintain existing activity, encourage expansion, and seek new facilities. Now more than ever, the future belongs to the prepared.

A. Fundamental and Incremental Economic Development Efforts

There are two essential facets of economic development which are referred to in this report as "fundamental" and "incremental." This analysis will focus primarily on the latter in terms of policy prescriptions, although substantial discussion of the former is also included.

"Fundamental" economic development incorporates much of what state government does on an ongoing basis. Its essential premise is that the first requirement for economic success is an overall environment that is conducive to economic success. The primary role of government in achieving business prosperity is to perform its traditional functions in an exemplary fashion. Outstanding public





schools and higher education institutions foster economic growth. Infrastructure (such as highways, water resources, utilities, and telecommunications) is a prerequisite to growth. An efficient administrative and regulatory process unencumbered by needless bureaucracy is vitally important. A clean environment is a major advantage for many desirable industries. A fiscal structure that meets public needs, provides expanding revenue to meet the challenges of increasing economic activity, and is perceived as fair and equitable pays significant dividends in attracting and retaining corporate activity. A judicial system that is balanced in its approach to compensation for legitimate harms and resolving disputes is essential. Other initiatives which positively impact the costs of doing business (such as effective workers' compensation and unemployment insurance systems) or the quality of life (such as crime reductions or improved public health) contribute to the overall climate for growth.

This study will examine issues of this nature on a broad level. It will comment as appropriate on these topics and offer general recommendations. The critical point is that no amount of specific, incremental development policy can hope to be successful if the overall desirability of an area as a site for business activity is low. Texas has some inherent advantages in this regard, such as location, climate, and physical resource endowments. Much of the core of the environment for development, however, falls heavily within the influence or control of the state government in its "fundamental" role.

The **other category of economic development activity undertaken by the public sector is "incremental" in that its purpose is to affect decision-making at the margin,** that is, to "close the deal." These initiatives typically take the form of either explicit marketing efforts aimed at increasing business activity or some type of incentive to encourage locations; they represent what most people view as development policy. Because much of this activity involves the transfer of public resources to private firms in one form or another, incentive programs are often controversial. State policy regarding incentives typically represents a miniscule portion of fiscal resources relative to fundamental functions, but is nonetheless absolutely essential to ultimate success.

Overall costs and other key factors are often approximately equal across several potential sites. Consequently, **although**





incremental incentives rank relatively low in decision factors on an absolute basis, they are almost invariably the difference between being on the “short list” and winning. They are, in effect, “the last mile” in economic development.

B. Importance of Economic Development Incentives and Marketing

In a perfect world with perfect information, all economic activity would invariably gravitate to its optimal (least cost) location, and there would be no role for incentives or aggressive marketing programs. In the “real” world, however, both are critical elements of the competition for expanded investment and job opportunities. In fact, a variety of factors have coalesced in recent years to make them even more significant.

First, **labor and capital mobility has greatly increased.**

Skilled workers in key growth sectors have shown willingness to relocate in response to enhanced opportunities, and sophisticated financial markets efficiently move capital and financial resources to their highest and best uses. The result is that many elements of traditional costs have been equalized across the country (and, in some instances, the world). Consequently, traditional relative strengths and weaknesses of states and areas are being minimized or even eliminated, and factors which are variable and discretionary become more critical to the location process.

Second, **the site selection process has become more sophisticated.** Firms have come to recognize that they have significant “bargaining power” with state and local governments and are using it to effectively reduce overall costs. It is quite common in large location decisions to have major national consulting firms involved in evaluating proposals from various geographic areas and even in negotiating the final structure. A positive reputation with these firms is essential to success (some states go so far as to entertain development consultants at major golf tournaments and similar events). Communities often engage their own representatives to assemble their submissions and assist in securing facilities. This process leads to more specialized analysis in all phases of site selection, thus bringing incentive packages into sharp focus and heightening the need for aggressive marketing of positive attributes.





Third, **increasing globalization has brought greater attention to all aspects of costs.** Firms, particularly in growth-oriented manufacturing sectors, must offer a mix of output, innovation, and profits that is competitive on an international scale. Consequently, corporations undertake massive efforts to achieve greater efficiency, ranging from downsizing to vendor consolidation to inventory management. These activities are often reflected in mergers designed to reduce costs through synergies and the elimination of duplication; in addition, companies turn to optimization of space utilization and greater reliance on e-commerce channels for purchasing and sales. In such an environment, what may appear on the surface to be relatively minor variations in costs across geographic areas can be key factors in location decisions, and incentives are an important part of the equation when areas are roughly equivalent in other respects.

Fourth, **firms are now held to higher levels of public scrutiny in debt and equity markets** than has been the case historically. The advent of online trading, 24-hour financial news, and large percentages of the population directly or indirectly investing in stocks and bonds has led to increased attention to corporate operations. Performance is followed by a rising number of analysts, and coverage of all aspects of company activity is unrelenting. The implications of even a small deviation from expected earnings can dramatically alter a company's fortunes, its access to expansion capital, and even its managerial structure and compensation. One result of this situation is that all costs receive substantial attention. Another is that, in seeking new locations, lower tax levels and specific economic incentive packages bring with them a fiduciary duty to minimize overall outlays and maximize profits. In the wake of recent corporate accounting irregularities, it is likely that this issue will magnify in importance over time.

C. Challenges for Texas

These forces pose significant challenges for Texas in that (1) the tax structure of the State imposes disproportionate burdens on capital-intensive sectors relative to other areas (a topic which will be discussed subsequently), and (2) the state's marketing and incentive programs are not as extensive or aggressive as those in other parts of the country and the world. This situation is exacerbated by two ongoing trends.





First, **the increasing technological component of production processes across a broad range of industries is resulting in much higher investment levels in plant and equipment as facilities are built, expanded, or modernized.** This facet of new facilities is further reinforced

by a tight labor market and related demographic factors which encourage more capital-intensive modes of operation. One important consequence is that taxes which adversely affect the cost of physical assets in a disproportionate manner become a greater source of concern over time, and incentives have a higher relative value.

Second, there has been a definitive trend of late toward **greater relative reliance on state and local governments to provide public services.** The percentage of total civilian services obtained at the state and local levels has risen from 67.5% to 80.7% over the past three decades. Similarly, the portion of all government services (including defense) provided at the state and local level has risen from 50.1% to 73.0%. With the exception of defense and security priorities surfacing in the aftermath of the terrorist attacks of September 11, 2001, this pattern is projected to continue into the future, as responsibilities are increasingly shifted away from the federal government. As this situation evolves, it increases the importance of an equitable tax structure and competitive incentive programs in domestic plant sitings.

D. Importance of Tax Structure

One industry study has estimated the disadvantage for Texas solely based on its current tax structure at 1%-2% of overall costs of operating a plant relative to several key competing states, even in the absence of any added inducements. The cost differential over the life of a typical semiconductor facility is about \$80 million, with a recent analysis determining an even larger disadvantage with regard to aircraft production. When this basic disparity is magnified by a spate of aggressive incentives around the country, the situation becomes even more severe.

E. Texas' Position in the Race for Corporate Locations

While there is no doubt that the Texas economy performed extremely well in the past decade and has many assets to support future expansion, the glowing numbers mask a disturbing phenomenon related to the factors described





above. **In the early to mid-1990s, Texas was the undisputed leader in the race for new capital investments, job growth, and new and expanding facilities. More recently, the state's position has dropped significantly.**

For example, from 1990 to 1996, Texas was in first or second place among all states for the number of new manufacturing locations; by 1999, the state had dropped to fifth. Additionally, during a period in which total facilities in the US soared to record levels and some large states doubled or even tripled their numbers of new plants, Texas saw its annual gain tumble by 25%. The rate of expansion in all facilities (both manufacturing and non-manufacturing) also fell by almost 25%. Following a very weak year in locations in 2000, Texas was ranked sixth in 2001 (behind Michigan, Illinois, California, New York, and Ohio) in the total number of new and expanded facilities. Texas fails to appear even in the top ten when per capita measures are used for total new and expanded facilities, total capital investment, or total new jobs created.

Perhaps even more ominous in this pattern is the decrease in major new projects with initial investments exceeding \$500 million. These massive production complexes are critical to long-range growth and development, as they (1) spawn extensive supplier networks, (2) typically implement multiple rounds of future expansion, and (3) are a catalyst to other sizeable facilities. Large-scale locations of this nature can literally redefine the economy of an area, as seen in Gulf Coast petrochemicals, defense aviation in Fort Worth, and microelectronics in Austin. Over the period from 1990-1996, Texas attracted 12 new investments of this magnitude (as well as 11 comparable expansions and modernizations in the petrochemical sector). Since 1996, there have been only two: an expansion of an existing facility (which required substantial local incentives and helped to preserve a significant employer) and the purchase and modification of an existing plant (which never reached capacity and recently announced closure). As this report is going to press, it appears that Texas may be successful in attracting a major new automobile facility. This location is driven by extraordinary state and local incentives which are well beyond the norm and a strong desire by the company to locate near complementary plants in Mexico. The state has not been a significant competitor, however, for dozens of other automobile facilities which have located in the US in recent years. Quite simply, Texas is falling behind. **The state is getting a smaller absolute and relative share**





of a growing pool of manufacturers and other locations, and virtually all of the big ones are getting away.

The importance of incremental development policies, such as tax incentives, employer-driven job training, and other initiatives which directly impact costs of doing business, is easily seen within the framework outlined above. It is also worthy of note that many other states have been quite aggressive in implementing comprehensive and innovative programs to respond to the emerging forces shaping economic development in the new millennium. These actions further amplify the need for Texas to systematically examine its existing programs and implement an effective strategy for future competitiveness.

F. Situation in Other States

One prominent example is **California**. Although recent difficulties with its electric power system may well have adverse implications for future performance (particularly over a short-term horizon), this state has reaped enormous benefits over the past few years from the creation of a more favorable business climate. California is ranked first in the nation in overall research and development (R&D) spending (\$30 billion annually). California also receives almost twice as much in federal R&D funds as any other state. Furthermore, California claims 34% of all venture capital invested in the US. California has attracted more new manufacturing plants than any other state in recent years, with the total number of new facilities rising by 385% between 1996 and 1999.

In 1996, California cut bank and corporate taxes by 5% and expanded the research and development tax credit from 8%-11% to 12%-24% for university-conducted research and development. The tax cut alone has been projected to save California companies more than \$250 million per year. Another tax incentive California offers to attract new business is a manufacturers' investment credit of 6% to offset income or franchise taxes. The credit may also be claimed against the bank and corporate tax; any unused credit may be carried forward up to eight years (in some instances, the credit can be carried forward a maximum of 10 years). A partial sales or use tax exemption of 5% for the first three years of operation may be provided to startup companies. The state also offers an enterprise zone program with tax credits for jobs, investments, and sales, as well as a local property tax





incentive. In summary, California aggressively uses tax policy to attract new manufacturing facilities and has been extremely successful in recent years.

Another state that has consistently surpassed Texas in economic development over the past few years is **Michigan**. Michigan consistently ranks first in the nation in total new and expanded facilities and near the top in both new manufacturing plants and new and expanded global operations. Moreover, Detroit has generally been among the leading metropolitan areas in total facilities and manufacturing facilities for the past several years.

Michigan has actively pursued a pro-business tax policy of late. Tax cuts have saved businesses nearly \$15 billion. The Michigan Legislature has also removed 3,000 outmoded regulations from its law. Another important contribution to the positive corporate environment in the state is the Michigan Economic Development Corporation (MEDC). This public corporation was formed by a gubernatorial executive order for the purpose of operating job and business attraction and retention programs. The board includes representatives of the business, economic, and higher education communities.

The MEDC has developed an advertising campaign that is intended to lure high-tech specialists, such as information technology experts, engineers, and computer and natural scientists to Michigan. The \$5 million campaign is highly ambitious—an Internet site has been created which allows job candidates to post career profiles and prospective employers to post job descriptions; both services are offered without charge.

Michigan's overall corporate tax burden is 1.6% below the national average. A chief contributor to this favorable statistic is the Single Business Tax (SBT). The SBT replaced seven different business taxes. The business income tax, franchise tax, and property tax on inventory were the chief taxes replaced. The current SBT rate is 1.9%, and this rate is slated to decline by 0.1% each year until 2021 when the SBT is to be eliminated completely.

Since the reforms were instituted in 1994, Michigan businesses have experienced a drop of 12.4% in business property taxes. In fact, Michigan's overall per capita property tax burden is 12.1% below the national average. Although





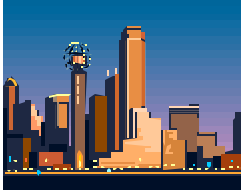
Michigan has a 6% state sales tax, many industrial and consumer goods are exempt. The state has enacted approximately 30 tax cuts over the past few years, most of which are targeted toward businesses. The state has also designated several “Renaissance Zones” in which new development is tax-free.

New York has also emerged recently as a formidable competitor for new manufacturing locations as a result of an aggressive business taxation strategy. Over the past several years, 36 tax cuts have resulted in \$52 billion in savings for New York businesses. In fact, nearly \$4 billion in direct business tax cuts have occurred since 1995, including a reduction of the corporate income tax from 9% to 7.5%. The New York corporate tax rate is steadily approaching its lowest level since 1970, and over the past five years the fiscal cost of doing business in New York has dropped by more than 33%.

In addition, numerous tax incentives have been initiated to attract businesses to New York. An Investment Tax Credit (ITC) of up to 10% of eligible investments is available to firms developing new production facilities which result in significant job creation. All unused credits may be carried forward for up to 15 years. New York also has a research and development tax credit of 9%. Additional credits also exist to encourage high-tech opportunity creation and investment, and there are sales tax exemptions for corporate purchases of necessary production machinery and equipment. A 10-year property tax abatement exists to encourage development of commercial property, and New York levies no personal property tax. Fifty-two different locales within the state have been declared “Empire Zones,” offering a wide range of benefits to businesses developing operations in disadvantaged areas. These benefits include discounts on electric power, additional tax credits for investment and job creation, and further tax exemptions on sales and property taxes.

In order to create a more appealing corporate atmosphere, the state has taken additional steps to lower other costs for businesses. New York businesses save over \$1 billion per year because of lower workers’ compensation costs. With unemployment insurance costs down by 33% per employee, businesses are also garnering an additional \$600 million in savings. Nearly 1,300 regulations have been either streamlined or completely eliminated, resulting in an impressive drop in red tape from the permitting process as





well as a much more rapid response to business needs. The primary focus, however, has been on tax reform and incentives.

Similar stories can be told for **Ohio, Illinois, North Carolina, and other leading industrial states** which have surpassed Texas in overall performance in recent years.

G. Job Training Programs

A comparable pattern is observed in job training programs. As will be discussed in more detail subsequently, Texas has recently eliminated its “Smart Jobs” program in light of unfortunate administrative and management issues. The result is that, although the state has a Skills Development Fund that works quite well, Texas is left with no effective employer-oriented initiative to support highly skilled occupational requirements. Because such programs are typically regarded as one of the more critical elements of incentive policy, the efforts in some significant competing states are briefly reviewed.

The **California** program is touted by many as an example for the nation. In California, strong emphasis has been placed on performance-based accountability; trainees must stay employed for at least 90 days after training before an employer can be reimbursed, for example. Another key aspect of that state’s program has been a division into four types of training: retraining (for employed workers in industries facing out-of-state competition), new-hire training (for unemployed persons), special employment training (a program allowing for more flexibility in employer eligibility), and the welfare-to-work program (for persons on welfare). This tiered system has the benefit of addressing social goals such as assistance for the unemployed as well as dealing with the specific needs of high-demand industries and economic development initiatives. Evaluation of the California program has shown positive results; trainees change jobs less frequently and receive greater wage increases. From the corporate perspective, productivity gains have been noted.

The **Georgia** Quick Start job training program is part of a broader training and skill system; the program can trace its roots back some 35 years. Rather than providing funding for training, Quick Start often involves the actual provision of services. The state also provides for basic training such as a





Certified Manufacturing Specialist program, which includes up to 150 hours of training in basic manufacturing skills through technical institutes. In addition, the retraining tax credit enacted in 1994 gives tax credits to firms involved in retraining their employees. Quick Start, as part of Georgia's spectrum of training mechanisms, is geared toward providing training for firms establishing new jobs in the state. Quick Start staff meets with senior management to establish a training plan; Quick Start may conduct the training or may set up a program with a technical institute.

Iowa's employer-focused job training program involves innovative funding through issuance of debt certificates. These certificates are based on the number of persons trained and are issued and sold by the involved community college. The borrowing is repaid using a portion of the income tax withholding for employees receiving the training. The Industrial New Jobs Training Program deals with both firms that are new to the state and expansion of existing companies; it uses diversions against incremental employee wages rather than general-fund revenues. The innovative financing is one of the most important aspects of the Iowa system of training, allowing for growth and flexibility. However, there are potential issues with the exclusive use of the community colleges in that some may be less capable than other entities of providing the training effectively.

Michigan's Economic Development Job Training (EDJT) grant program awards funds through a highly competitive process to the main providers of training under the program—community colleges. The program works with local workforce development boards which directly control the delivery of services, though they do not provide the training themselves. Key criteria on which grant applications are judged include (1) whether the business is in a high economic-impact sector that produces goods or services exported out of the state, (2) whether the business is located in a distressed area, (3) whether the firm has already shown a commitment to operations in Michigan through capital investment, (4) whether worker wages meet certain levels, (5) the number of disabled workers involved, (6) the number of new workers to be hired, (7) how many workers are expected to benefit, (8) the degree to which the proposed training is transferable to other employers, (9) cost factors, (10) the level of employer contribution, (11) the training provider, and (12) other factors. Grant applications utilize a scoring system related to the





specified criteria. Because demand for grants exceeds funding, there has been criticism that particular industries and/or regions are favored; however, the program is generally favorably perceived (and Michigan has led the nation in new locations for five consecutive years). Comprehensive monitoring is one reason for the success of the program.

The **New Jersey** program focuses on economic development as a goal. The application process is rigorous, including a review of detailed financial information, training-related problems, and how proposed training will address these problems. In addition, measurable outcomes must be defined. Funding is provided through the unemployment insurance mechanism, and available training covers a broad spectrum. The program is geared to promoting cooperation between community colleges and employers. Plans for future training are included as part of the approval process, thus ensuring employers are committed to continuing education.

The **North Carolina** employer-focused program relies on the provision of training through the state's network of community colleges. Every employer and individual in the state is eligible to participate in the Occupational Continuing Education; colleges charge a flat fee for courses which is low by most standards. The New and Expanding Industry Training Program was established in 1958; it is an economic development incentive program that provides community colleges funding for training projects for newly locating or expanding firms. There is strong cohesion between the training programs and the economic and workforce development goals. The state's community college system was founded on the precept of providing workforce-training; access to inexpensive workforce training through the community colleges has been a key force in North Carolina's economic performance.

These are a few of many examples of effective programs. Other states, such as **Alabama** (which recently built an on-site training facility as part of a package of incentives to lure a major automobile manufacturer) and **Illinois**, have also performed quite well. While economic development is multi-faceted, workforce issues are increasingly emerging as the most critical part of an overall menu of incremental incentives.

This section has set forth the basic framework for examining economic development in Texas. Both fundamental and





incremental issues are essential. The fundamental policies establish the type of environment which encourages firms to locate in an area. Incremental incentives contribute to successful competition with other desirable sites. The two aspects of overall policy are synergistic in their effects; neither can be successful without the other. **Because economic development is ultimately related to virtually every aspect of State activity, it is important that the Office of the Governor be extensively involved in the process. Governors are playing an increasing role in successful programs throughout the country, and Texas needs a comparable “big picture” approach.** A brief discussion of the methodology employed in the analysis is now provided.

III. Methodology

Because of the comprehensive nature of this analysis, there are several techniques and approaches involved. Initially, an extensive review of materials was conducted. Among the items examined were the following:

1. Economic development and public policy studies conducted around the country.
2. Economic development plans and programs for various states and areas, including prior efforts in Texas.
3. Data regarding economic workforce, costs, quality of life, and demographic factors in Texas (including regions and various urban and rural areas) and other states.
4. Academic and trade articles related to economic development, site selection, comparative performance, public policy, and related topics.
5. Data related to relevant aspects of business activity, such as tourism and corporate locations and expansions.
6. Studies, data, forecasts, and other information related to the short and long-range performance of a broad spectrum of industries.





7. Pertinent legislation and associated analysis.
8. Governmental reports and studies on relevant issues.

Much of this material is also compiled and used in subsequent segments of the investigation.

Some elements of the evaluation involve straightforward analysis of data. Such segments include quality of life characteristics, comparisons and benchmarking of key measures, and identification of key growth sectors. Other elements of the analysis involve public policy research methods, most notably impact assessments.

The **impact evaluations** are conducted using the Texas Multi-Regional Impact Assessment System (MRIAS), which was developed and is maintained by The Perryman Group. This model, which is part of a larger national system, has been used in hundreds of applications across a broad spectrum of issues. The model simulates the direct, indirect (multiple rounds of input purchases), and induced (multiple rounds of payroll spending) effects of any stimulus (positive or negative) on various sectors of the economy. The MRIAS reflects the unique industrial composition of any county or multi-county region in the state and tracks the interactions among more than 500 categories of goods and services. It also has numerous modules for specialized applications (tourism, consumer spending, transportation infrastructure) and is fully linked to the Texas Econometric Model, the Texas Industry-Occupation Model, a complete real estate absorption system, and a dynamic fiscal impact simulator. All of these models are maintained by The Perryman Group. The transportation submodel is fully consistent with the national system developed by the US Department of Transportation, but contains numerous extensions to account for Texas-specific factors and elements of business activity omitted from the national system. The overall impact model is also well suited for cost-benefit and rate-of-return calculations.

The Texas Multi-Regional Impact Assessment System uses standard input-output analysis techniques. Essentially, extensive surveys and corroborative data are used to estimate the amount of each input required to make a unit of output of a given product or service. The same basic set of information can also reveal the various uses of a given sector across all other industries. These estimates for all segments of the





economy can be mathematically manipulated to derive the “multiplier” effects associated with various types of economic activity. The Texas system incorporates extensive localization and pricing parameters and, because of its dynamic linkage with a large-scale econometric model, can provide detailed results for expenditures (real and nominal), gross product (real and nominal), personal income (real and nominal), wage and salary earnings (real and nominal), employment, productivity, and retail sales (real and nominal) for any area of the state.

Another segment of the study which involves substantial empirical analysis is the **identification of target industry clusters** for the state as a whole and its various geographic planning regions. This process begins with a detailed assessment of the capabilities of the area to support various types of production. One aspect of this initial phase is to examine the existing industrial base of the area and determine the associated primary potential suppliers and customers. This “linkage analysis” identifies sectors that might achieve costs savings from proximity of other factors as a result of interrelationships in the production chain. It further facilitates the identification of core clusters of activity in which multiple related categories of complementary activity provide a mutual reinforcement of competitiveness. This procedure uses the extensive database maintained by The Perryman Group and tracks the interactions among industries using the coefficients of the Multi-Regional Impact Assessment System.

Further evaluation of the suitable sectors for each region is obtained from a **determination of net export capabilities**. An area is a net exporter of a good or service if it produces more than is required to meet its local needs. When a region is a net exporter, it has demonstrated a competitive advantage in the resources and requirements for the relevant type of production. If the region is relatively close to being a net exporter (generally measured by an export/import ratio in excess of 0.7), then potential exists for future locations, and it is unlikely that there are any substantial structural impediments.

This net export analysis and similar performance indicator assessments are conducted using simulations of the relevant geographic submodels of the Texas Econometric Model. This system was developed and is maintained by The Perryman Group and has been providing forecasts of business activity





within the state for more than 20 years. The Texas Econometric Model revolves around the simultaneous determination of income, output, and employment by detailed production category. The model also contains numerous integrated systems reflecting other economic aggregates and is responsive to an extensive set of external factors. The geographic submodels account for the unique aspects of local areas, yet are fully consistent in their projections with overall state performance.

The final “technical” aspect of the regional target industry cluster analysis examines **local workforce characteristics** using the Texas Industry-Occupation Model. Specifically, current and projected employment by industry derived from the econometric model is translated into more than 700 occupational categories. This information may then be matched with job requirements in various sectors to determine potential targets for new locations.

Through the merger of linkages, current competitive advantages, and workforce capabilities, a viable list of preliminary industry groups for potential recruitment may be determined for a given area. This list is then refined through an assessment of any barriers which might preclude success (such as raw material requirements, air quality, or transportation needs). The final step in the process departs from region-specific considerations and takes a “top down” look at the relevant industries. Through examining state and national econometric models, global trade and production patterns, and extensive literature on various market segments, sectors with a reasonable likelihood of opening or expanding existing plants are identified. Emerging industries are also identified. The final set of target clusters is, then, those for which the area has the requisite resources and competitive strengths and for which prospects for future development are promising. (This analysis is restricted to those sectors—such as manufacturing, sophisticated business and health services, utilities, distribution, tourism, and telecommunications—which tend to serve external markets and, thus, bring resources into a region.)

In addition to the extensive review of data and materials and substantial body of empirical work, the findings from this study are also significantly impacted by extensive input from relevant constituencies. Over the course of this analysis, The Perryman Group has had extensive discussions with





representatives from numerous state agencies, statewide elected and appointed officials, local elected officials throughout the state, key legislative leaders from both parties, representatives of key trade groups, dozens of economic development professionals and site selection consultants, business leaders, educators, and chamber of commerce executives. The work was also fully coordinated with the board and staff of Texas Economic Development, the Governor's Task Force on Economic Growth, and the Governor's Council on Science and Biotechnology Development. An overview of some key "fundamental" economic development issues confronting Texas is presently offered.

IV. "Fundamental" Economic Development Issues

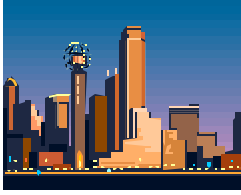
As noted earlier, the vast majority of public policy which impacts success in economic development also has much broader implications. Many of the essential functions of government in establishing the framework for state activity also serve to set the stage for business expansion. In the absence of these core functions and outcomes, no set of incremental initiatives, no matter how extensive or innovative, will yield desirable results. The current section explores several of these major topics of concern.

A. Education

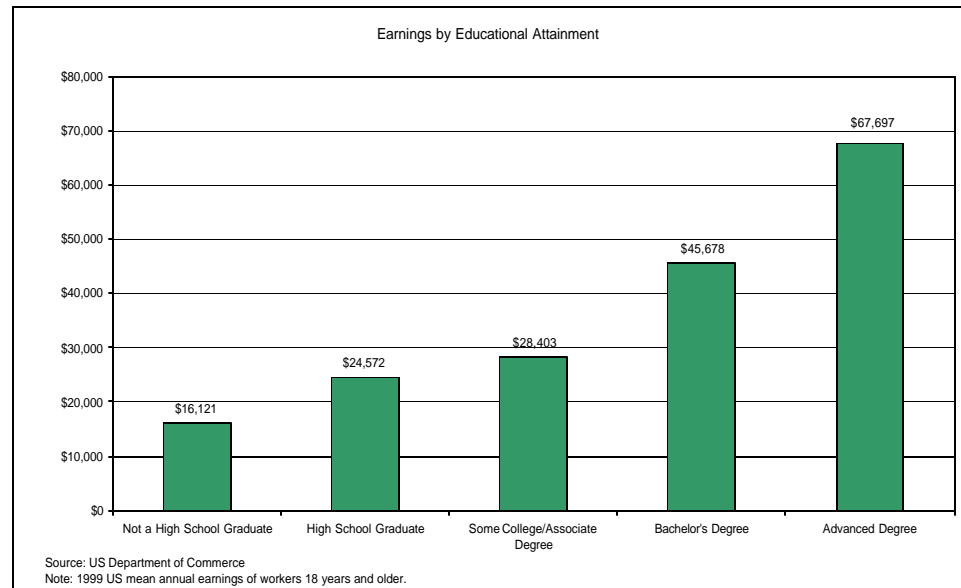
It is probably impossible to overstate the value of education to individuals and, indeed, society as a whole. A learned citizenry enhances all aspects of quality of life, promotes civic involvement, and brings many intrinsic benefits. Education is also quite important to the economy and future development. A well-trained populace contributes to workforce quality and overall earning capacity.

The relationship between the level of education and income is both striking and well documented. It has been around for decades and the relative gaps are widening over time. A person without a high school education typically earns about \$16,121 per year. The addition of a high school diploma boosts annual earnings by more than 50% to \$24,572. Clearly, encouraging Texas high school students to stay in school is an extremely worthwhile goal. In addition to enhanced living standards and the ability to spend, invest, and





pay taxes in the state economy among those with higher educational attainment, those at the lower end of the earnings spectrum are much more likely to be a burden on the social service system and a strain on state resources for many years.



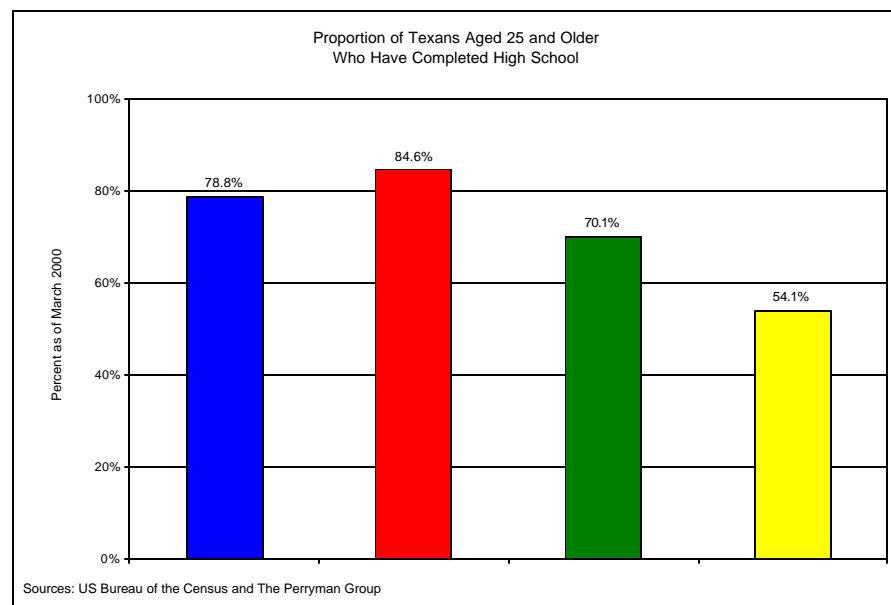
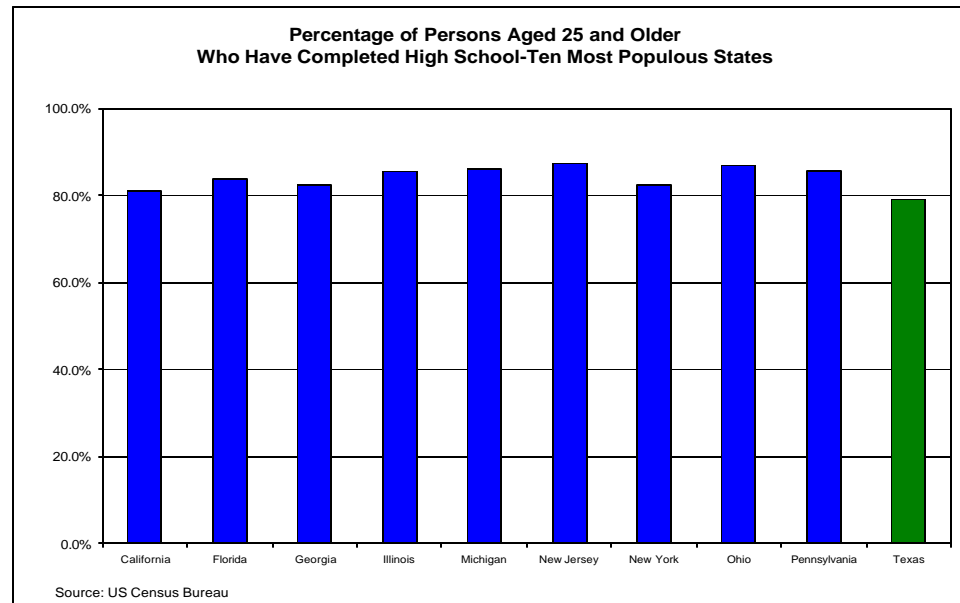
The difference between the mean earnings of persons with high school diplomas and those with some college or associate's degrees is a notable 16%, or \$3,831 per year. The amount of variation between a high school education and a bachelor's degree is even more pronounced. Completing college increases mean annual earnings by more than 82%, to a level of \$45,678.

By many standard measures, educational attainment in Texas is inadequate. According to the US Census Bureau, Texas ranks 46th among the states in high school educational attainment. Only 79.2% of Texans receive a high school diploma by the time they are 25 years of age, ranking the state last among the ten most populous states which are frequently competitive for new locations. Although 78.8% of whites have completed high school and 84.6% of African Americans have completed high school, a mere 54.1% of Hispanic Texans have a high school diploma by their twenty-fifth birthday. Overcoming these difficulties is exacerbated by the fact that the **poverty rate among children in Texas is more than 30% above the national average.** The state only ranks in the middle of the country (and behind most key competitors) in math and science achievement, a fact which is





further exacerbated by the US failing to rank among the top ten nations in what is clearly a global market for talent. Texas lags the national average in expenditures per pupil by more than \$500.

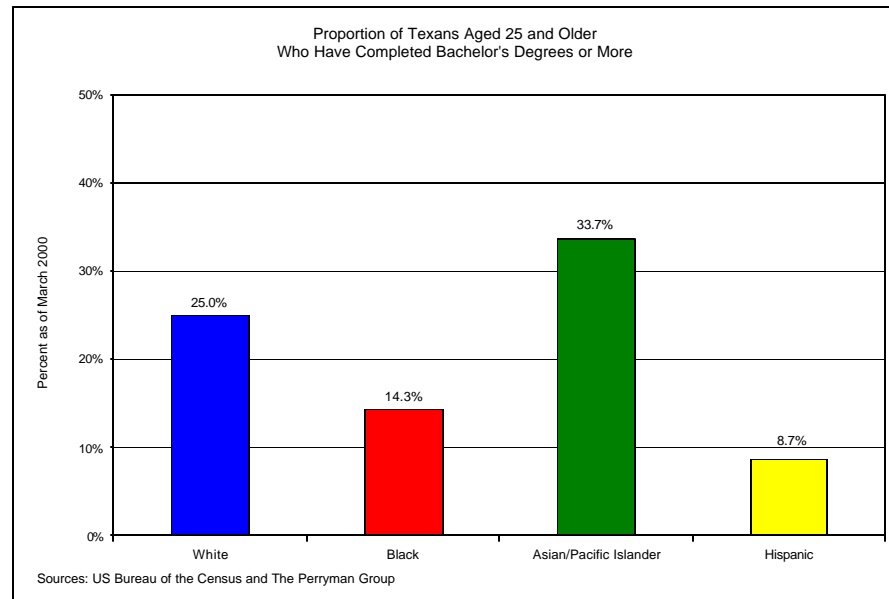


The statistics with regard to higher educational attainment levels are also a cause for concern, particularly with regard to ethnic disparities in achievement. Texas ranks thirty-third among the states in percentage of adults with a bachelor's degree. While one-quarter (25%) of whites have completed a college degree,





only 14.3% of African Americans and 8.7% of Hispanics have achieved similar levels of education. However, 33.7% of Asian/Pacific Islanders have attained a college degree.



It should be noted that some statistics show signs of improvement. For example, it appears that educational attainment levels for Hispanics are slowly rising. In 1991, 47.9% of those 25 years and older had completed four years of high school; as noted before, 54.1% in the group had attained a high school education by 2000. Nonetheless, recent demographic studies based on the 2000 Census unequivocally reveal that, if current trends in population and educational levels persist, Texas will experience declining average living standards over an extended time horizon.

With an increasing percentage of the school-age population being concentrated in groups with traditionally high poverty and dropout rates and lower educational attainment, the state is faced with a daunting challenge. This task is further complicated by the fact that English is not the primary language in many of the homes of elementary and secondary school students, thus increasing the resource requirements. It is little wonder that one of the key components of the *Closing the Gaps* initiative of the Texas Higher Education Coordinating Board is to keep Texas students in high school.

As still another element of the importance of education, a recent study by the University of Wisconsin-Madison reveals that **firms locate in areas with high performing schools**





simply because skilled workers demand good learning experiences and opportunities for their children. This finding, which corroborates earlier research and is consistent with the “fundamental” role of government in economic development, is particularly relevant for technology-oriented growth industries. In fact, the areas which have enjoyed success in attracting such facilities in Texas, without exception, boast exemplary schools.

Higher education also plays a vital and essential role in long-term economic progress for Texas. In addition to improving high school graduation rates, there is also a critical need (identified by the Texas Higher Education Coordinating Board) to increase college enrollment. **Working to remove barriers to college entry, particularly financial impediments, will be to the advantage of the state and its residents.**

One program that could potentially help in this regard is the **Texas Next Step** program, proposed by Comptroller Carol Keeton Rylander. This initiative, which will be considered by the 2003 Texas Legislature, would assure every Texas high school graduate the opportunity to complete up to two years' work at any public community, technical, or lower-division college in the state. This program, if enacted, has the potential to provide opportunity to students who otherwise could not afford to attain a level of education beyond their senior year in high school, thus contributing to long-term earning capacity and ultimately aggregate prosperity. Some states, such as Georgia, offer programs to assure a baccalaureate education to all students maintaining certain levels of achievement. This plan has induced substantial additional enrollment and helped Georgia to attain an excellent reputation for workforce quality.

Another key element of the *Closing the Gaps* agenda which is relevant to economic development is the effort to **match higher education to the needs of business.** Although the idea of education for its own sake is certainly appealing, the vast majority of people cannot afford to make higher education decisions on that basis. Instead, the likely income gains associated with various educational choices are typically carefully considered. By offering on-target programs, colleges and universities can better serve the needs of Texans. This process exists to some extent, particularly in community and technical colleges and in job-oriented state training contracts, but much more can be done. In addition,





Texas businesses will benefit from the constant influx of quality graduates.

One other key issue related to education is at a still higher level in the hierarchy of economic development. Specifically, the training of scientists, engineers, medical researchers, and similar professionals is essential for Texas to be a viable contender for emerging technologies and other high-growth sectors. High-quality research, the ability to attract substantial federal grant funds, and state-of-the-art laboratory and computational facilities play a vital role in success in such areas as biotechnology and nanotechnology. For the state to achieve a sustained presence in these sectors, significant investment in higher education is essential. The Governor's Council on Science and Biotechnology Development has examined and documented this issue in great detail.

In summary, **education at all levels is a cornerstone of economic development** from multiple perspectives.

Progress is being made on many fronts. For example, more rigorous curriculum and evaluation procedures are being implemented in public schools. The Texas Education Agency and the Texas Higher Education Coordinating Board have a joint K-16 initiative. Numerous new curriculum additions are meeting the needs of employers. Yet, there is much to be done. Specifically, achievement does not stack up well against national norms; small and disadvantaged areas have notable obstacles to overcome; there is a need to integrate technology across the state at all levels; real per capita spending on higher education has fallen precipitously; and access remains problematic for major segments of the population. For Texas to achieve its full potential, its citizens must be educated to meet the ever-increasing demands of a sophisticated economic complex. This outcome is only attainable within the context of an exceptional educational system at all levels.

B. Environment

The relationship between the economy and the environment is quite complex and multi-dimensional. At times, it appears to be one of conflict, as interested parties clash over the proper development of residential and commercial real estate, industrial sites, reservoirs, or other economic resources. On the other hand, a substantial body of evidence suggests that environmental quality contributes to economic growth,





particularly among high-tech industries which seek desirable and attractive locations. Similarly, clean air and ample supplies of clean water are vital to public health.

In an effort to gain greater insight into this controversy, The Perryman Group performed an extensive cost-benefit analysis of compliance with environmental standards. The study, which was conducted several years ago, examined a broad range of issues, from productivity losses and out-of-pocket outlays to the stimulus to production and economic development. The findings suggested that, **for the state as a whole, there was a modest net cost associated with compliance with environmental standards.** This loss, however, is a small percentage of the total economic activity within the state (1.22% of output, 0.88% of income, and 0.50% of employment) and may well be justifiable on other grounds, particularly in light of current issues related to water quality and availability and meeting clean air mandates. **Although many aspects of environmental regulation are national in scope, Texas can gain a competitive advantage by promoting environmental quality while (1) basing any state requirements on valid scientific evidence regarding public health and safety and (2) maintaining an efficient and predictable enforcement process.**

1. Air Quality Issues

a. Overview

Air pollution in many parts of Texas, as well as across much of the nation, is a very serious problem. Most of this pollution results from daily business routines and activities, such as higher factory output, increased construction, and greater traffic congestion.

During the 1990s, environmental standards became more stringent as part of the 1990 Clean Air Act Amendments at the same time Texas was experiencing substantial economic growth. Specific attention was given to the operation of vehicles and industrial equipment, considered to be major sources of two types of pollutants—nitrogen oxides and volatile organic compounds. These pollutants combine in hot, stagnant air to form ground-level ozone. High levels of this ozone can cause coughing, wheezing, headaches, shortness of breath, and throat and lung irritation. These health





conditions result in increased medical expenses and losses in productivity and efficiency throughout the economy.

The Federal Clean Air Act as amended in 1990 is the legal foundation for the national air pollution control program. Authority to enforce the provisions of the Act is granted to the Environmental Protection Agency (EPA). This Act requires that each state develop and regularly update a State Implementation Plan (SIP) that denotes measures being taken to maintain proper air quality standards. The EPA has the authority to approve or reject SIPs, replace SIPs with Federal Implementation Plans (FIPs) when deemed necessary, and to monitor the achievement of goals outlined in SIPs and FIPs. The EPA also imposes mandated penalties for areas that are not in compliance following a transition period. These sanctions include (1) limiting new facility development by requiring corresponding reductions in emissions from other sources at greater than a one-to-one ratio (which has the practical effect of virtually eliminating such growth) and (2) withholding federal highway funds from the affected areas.

Texas has been found by the EPA to be in violation of air quality standards in the metropolitan areas of El Paso (levels of ozone, carbon monoxide, and particular matter too high), and Houston/Galveston/Brazoria, Dallas/Fort Worth, and Beaumont/Port Arthur (ozone levels too high). These areas have been above mandated ozone levels for years, and face mandatory sanctions by the EPA unless clean air standards are met in the next four years.

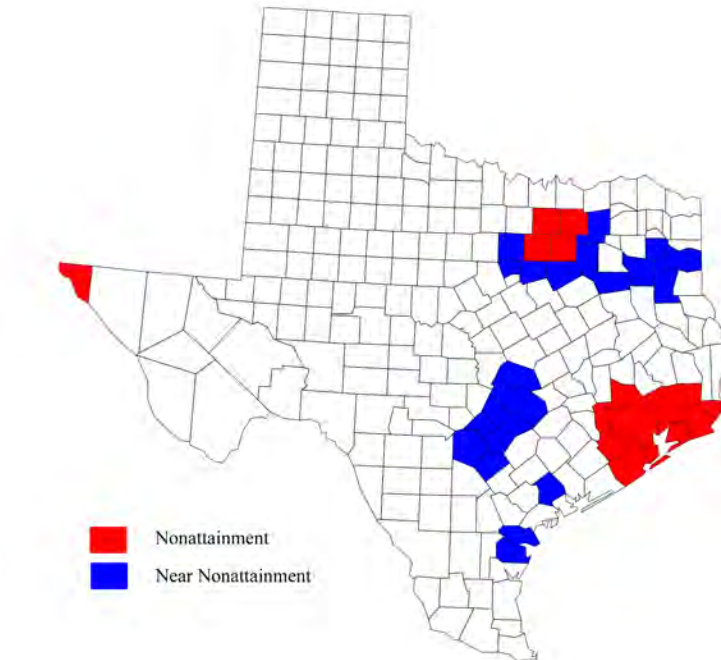
In addition to these nonattainment areas, six additional urban regions—Corpus Christi, Victoria, Austin-San Marcos, San Antonio, Tyler, and Longview-Marshall—are characterized as “near nonattainment” areas. Because these regions could also be in jeopardy if their ozone levels are not reduced appropriately, they are incorporated within the present analysis.

The counties included in these areas are: Bastrop, Bexar, Brazoria, Caldwell, Chambers, Collin, Comal, Dallas, Denton, El Paso, Ellis, Fort Bend, Galveston, Gregg, Guadalupe, Hardin, Harris, Harrison, Hays, Henderson, Hood, Hunt, Jefferson, Johnson, Kaufman, Liberty, Montgomery, Nueces, Orange, Parker, Rockwall, Rusk, San Patricio, Smith, Tarrant, Travis, Upshur, Victoria, Waller, Williamson, and Wilson.





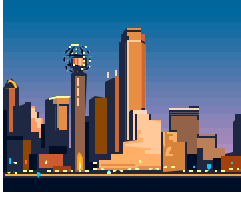
Nonattainment and Near Nonattainment Areas in Texas



Although they represent only a small portion of the vast landmass of Texas, they represent more than 70.0% of the state's population, 76.4% of aggregate employment, 83.4% of personal income, and 83.0% of gross state product. Nearly 85.0% of manufacturing activity in Texas is located in these counties. In addition, because of the integrated nature of the Texas economy and the dependence of rural and suburban areas on spin-off activity from the larger metropolitan areas, all parts of the state are affected by what occurs in these regions.

A major component of the Texas SIP is the Texas Emissions Reduction Plan (TERP). The plan was established by the 77th Texas Legislature through enactment of Senate Bill (SB) 5 and incorporates a variety of voluntary financial incentive programs, as well as other programs designed to assist in the improvement of air quality across the state. The overarching goal of the TERP as established in SB5 is to assure that the air in the state is safe to breathe and meets minimum standards under the Federal Clean Air Act. The TERP is also charged with funding research and developing multifaceted approaches to solving the state's environmental problems, while making Texas a leader in emerging technologies by creating new business and industry opportunities.





The TERP contains several financial incentive and assistance programs, administered by various state agencies, to address these goals. Included are the emissions reduction incentive grants program, the heavy-duty motor vehicle purchase or lease incentive program, and the light-duty motor vehicle purchase or lease incentive program. The TERP also has a technology research and development program and several energy efficiency programs.

A major component of the TERP is the grant program to replace and retrofit diesel engines with unacceptable levels of emissions. Funding for this program was authorized by the Legislature at the end of the last session through a significant increase in fees on cars imported into the state (from \$1.00 to \$225 per vehicle). This fee increase was subsequently struck down by a court challenge, thus leaving a key element of the state compliance plan without a source of financing. The EPA has indicated that the Texas SIP will be deemed non-compliant unless TERP funding is restored. Estimates indicate \$188 million will be required each year of the biennium for the program to be fully funded. If the funds are not made available and the SIP is declared non-compliant, then the state is potentially subject to severe sanctions.

Because of the obvious significance of this situation and its potential consequences for all Texans, it is appropriate to evaluate the economic and fiscal consequences of non-compliance with the Clean Air Act Amendments. The empirical elements of this analysis necessarily focus on multiple issues. Initially, the interrelationship between the affected areas and the remainder of the state is explored. This process involves examining the economic impact of current activity in the sectors and regions affected by the Clean Air Act Amendments to examine the “spillover” effects to other parts of the state. Two scenarios are used in this analysis. The first examines only the sectors for which air quality is a direct factor. These industries include oil and gas extraction, electric power generation, and several categories of manufacturing (petroleum refining; chemicals; rubber and plastics; stone, clay, and glass; and primary metals). The second incorporates the entire manufacturing sector. The rationale for this latter approach is simply that all types of goods production can be hindered by inadequate air quality. This fact is widely chronicled, particularly with regard to high-tech, high-growth industries (such as electronics, communications equipment, and computers). In fact,





adequate environmental standards are frequently a prerequisite for site selections in these industries.

The next phase of the investigation focuses specifically on the consequences to Texas of non-compliance. The adverse impacts stem from three sources. First, the economic aspects of ongoing health consequences are evaluated. This process makes use of recent EPA estimates of annual health-related costs, with allocations to Texas based on relative concentration of affected areas. The proper industry allocations for the impact assessment are derived based on a standard distribution of productivity effects across industries. Two scenarios were simulated based on the upper and lower bounds of the EPA analysis. This cost is a recurring annual loss to the state.

The second factor is the impact of sanctions limiting future expansion in the relevant set of industries. Two scenarios were considered, one reflecting only those manufacturing categories with direct consequences (as outlined above), and one including the entire manufacturing sector (both scenarios encompass oil and gas extraction and electric power generation). It is assumed in both instances that significant non-compliance would impact growth potential over a ten-year period, with baseline projections for the relevant geographic areas used as a benchmark for establishing the magnitude of the impacts.

The third factor relates to the effects of a sanction on the availability of federal highway funds in the affected areas. Historical levels of funding and allocations to the relevant regions were used to estimate the level of infrastructure funding at stake. The computations reveal that over \$1.1 billion per year could potentially be lost. For purposes of the current assessment, it was assumed that 80.0% of the amount would be foregone for a five-year period. The modeling process evaluates both (1) the temporary losses from engineering and construction activity associated with highway development and (2) the unrealized benefits of enhanced mobility once projects were completed (assuming a three-year construction cycle).

As a part of this evaluation, the fiscal effects of the various losses on State revenues are estimated and reported. Additionally, a ten-year synopsis is prepared to permit an overall benefit-cost assessment of the restoration of State





funding for the TERP. It is assumed that the sanctions would only be imposed beyond this period for mandated compliance. All future monetary values throughout the analysis are given in 2002 dollars to eliminate any effects of inflation, and the final cost-benefit analysis discounts future lost revenues to present value based on the approximate long-term borrowing rate of the State.

b. The Importance of Compliance to the Entire State: Synopsis of Key Results

As noted earlier, the nonattainment and near nonattainment areas clearly dominate the business complex of the state. With regard to the industries most directly impacted by clean air standards, these regions currently produce 84.3% of the state's output and have experienced about 95.1% of the aggregate gains since 1990. These numbers change only modestly (to 83.8% and 89.6%, respectively) if the entire manufacturing complex is considered.

Because of the integrated nature of the state economy, the other segments of Texas are highly dependent on these dynamic regions. As an illustration, the total current economic impact of the **directly affected industries** in the nonattainment areas on the Texas economy is estimated to be

- ✓ \$826.6 billion in Total Expenditures;
- ✓ \$286.2 billion in Gross Product;
- ✓ \$160.5 billion in Personal Income; and
- ✓ 3,406,676 Permanent Jobs.

While the direct effects occur within the production areas, approximately 27.8% of the indirect and induced benefits accrue to other parts of the state. These benefits to external areas of Texas include

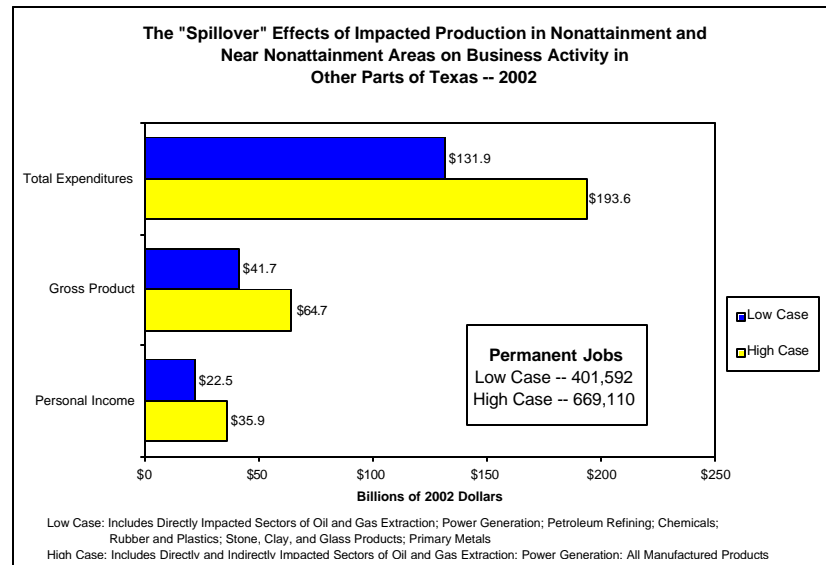
- ✓ \$131.9 billion in Total Expenditures;
- ✓ \$41.7 billion in Gross Product;
- ✓ \$22.5 billion in Personal Income; and
- ✓ 401,592 Permanent Jobs.

These amounts represent 30.7% of output in these areas, 26.1% of personal income, and 17.0% of employment. If the individuals who live outside the nonattainment areas but work in related activity within the nonattainment areas are included,





the employment total rises to 20.7%. Note also that the compensation associated with these jobs is more than 50.0% higher than the average for these outlying areas, and that the degree of dependence has been increasing markedly over time.



When the analysis is extended to incorporate the **entire manufacturing** arena, the results are even more significant. Under this scenario, the overall benefits to Texas from production in nonattainment and near nonattainment areas are

- ✓ \$1,241.7 billion in Total Expenditures;
- ✓ \$472.2 billion in Gross Product;
- ✓ \$276.1 billion in Personal Income; and
- ✓ 6,175,726 Permanent Jobs.

The corresponding spillover effects are

- ✓ \$193.6 billion in Total Expenditures;
- ✓ \$64.7 billion in Gross Product;
- ✓ \$35.9 billion in Personal Income; and
- ✓ 669,110 Permanent Jobs.

In this instance, the benefits outside the nonattainment areas include 47.5% of output, 41.6% of income, and 28.3% of employment (38.0% if commuting residents are added). Thus, it is obvious that any sanctions which adversely impact the regions with compliance issues will have notable consequences for the remainder of the state.





the regions with compliance issues will have notable consequences for the remainder of the state.

As a final note, the view has been expressed at times that limitations on the largest urban areas in Texas might well provide opportunities for other areas to capture the resulting activity. This contention is not consistent with the realities of economic development and progress. First, as noted above, the major metropolitan areas are critical drivers of performance in other parts of the state. Moreover, these diverse regions possess a number of competitive resources which are simply not available in sufficient quantities in smaller population centers. Among them are workforce availability, multi-modal transportation access, supplier and customer networks, amenities, international carriers, and other factors that enable them to compete effectively for new and expanded facilities on a national and global scale. If locations of industrial plants were restricted in these areas because of failure to meet clean air standards, it is likely there would be little expansion of plants in other parts of the state. Instead, site selections would probably occur in urban centers of other states that offer the requisite set of resources.

Infrastructure findings are comparable. Construction on large-scale mobility projects is concentrated in these urban areas. Should major infrastructure initiatives in these areas suffer because of failure to comply with environmental standards, funds for these entities would probably not be distributed to other segments in the Lone Star State. Instead, because federal dollars are usually allocated based on traffic counts, corridor locations, linkages, and similar criteria, the money would likely go to high-traffic regions elsewhere in the US. In summary, all of Texas has a significant interest in achieving compliance with Clean Air Act standards.

c. [The Economic and Fiscal Impact of Potential Non-Compliance: Synopsis of Key Results](#)

As noted earlier, the results of non-compliance occur in numerous settings, several of which are examined at this point.

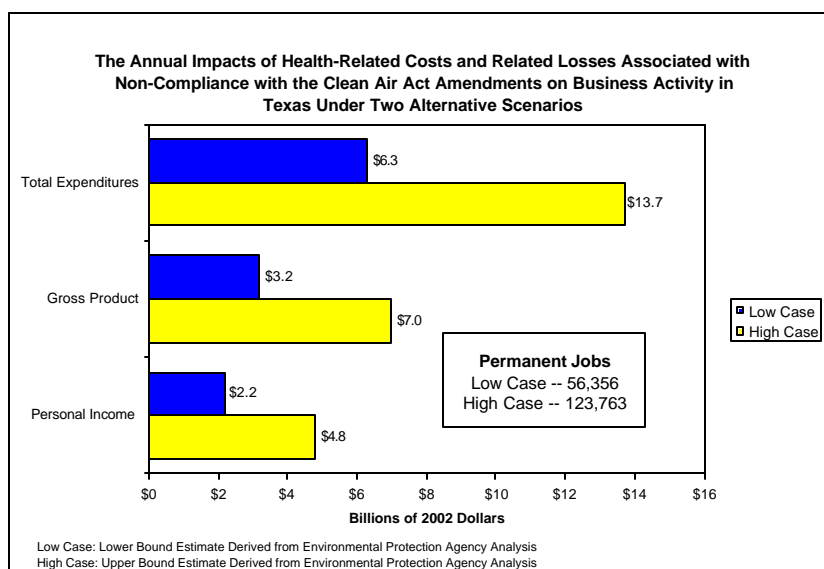




1) Health Effects

The aggregate losses to Texas in terms of medical expenses, lost time and productivity, and other health-related factors are estimated in the “low case” scenario to be

- ✓ \$6.3 billion in Total Expenditures;
- ✓ \$3.2 billion in Gross Product;
- ✓ \$2.2 billion in Personal Income;
- ✓ 56,356 Permanent Jobs; and
- ✓ \$157.4 million in State Fiscal Revenue.



Under the “high case” scenario, these effects increase to

- ✓ \$13.7 billion in Total Expenditures;
- ✓ \$7.0 billion in Gross Product;
- ✓ \$4.8 billion in Personal Income;
- ✓ 123,763 Permanent Jobs; and
- ✓ \$345.7 million in State Fiscal Revenue.

Note that these are annual estimates and, thus, persist over an extended period of time.

2) Expansion Restrictions

Assuming that the restrictions on expansion occur over a ten-year period and are confined to the directly affected sectors, the losses to the state economy in the final year of the analysis will be

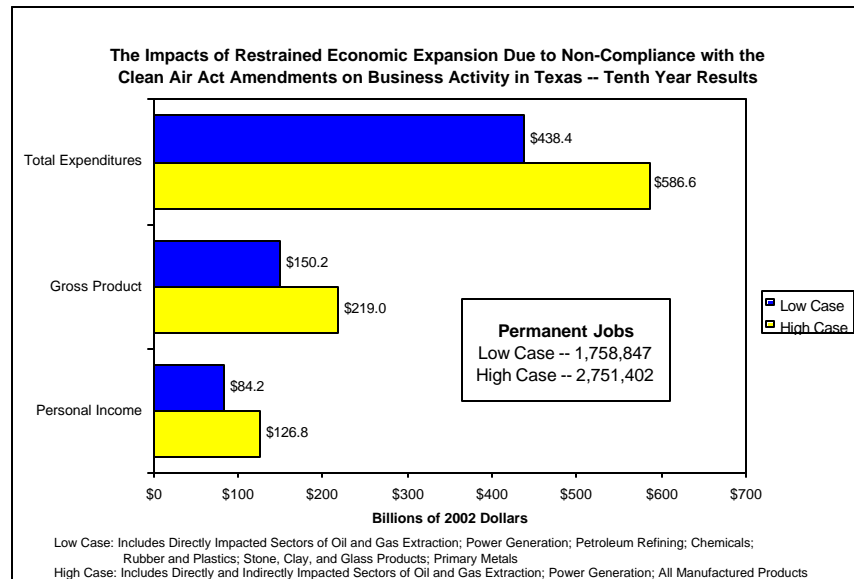




- ✓ \$438.4 billion in Total Expenditures;
- ✓ \$150.2 billion in Gross Product;
- ✓ \$84.2 billion in Personal Income;
- ✓ 1,758,847 Permanent Jobs; and
- ✓ \$7.2 billion in State Fiscal Revenue.

If this sanction has a corresponding effect on the ability to attract other types of manufacturing (which seems likely), these adverse impacts will, by the tenth year, increase to

- ✓ \$586.6 billion in Total Expenditures;
- ✓ \$219.0 billion in Gross Product;
- ✓ \$126.8 billion in Personal Income;
- ✓ 2,751,402 Permanent Jobs; and
- ✓ \$10.6 billion in State Fiscal Revenue.



Obviously, the consequences of severe limitations on new expansion in key export sectors have a devastating effect on the aggregate economy.

3) Lost Highway Funds

The loss of a substantial portion of federal highway funds for a single year in the relevant areas brings losses during the construction period of





- ✓ \$3.6 billion in Total Expenditures;
- ✓ \$1.7 billion in Gross Product;
- ✓ \$1.1 billion in Personal Income;
- ✓ 27,122 Person-Years of Employment; and
- ✓ \$88.6 million in State Fiscal Revenue.

Once the construction process is completed, the improved mobility brings benefits across a wide variety of sectors on an ongoing basis. This yearly gain which would be foregone is estimated to be

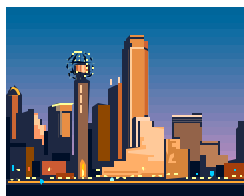
- ✓ \$464.3 million in Total Expenditures;
- ✓ \$238.3 million in Gross Product;
- ✓ \$145.0 million in Personal Income;
- ✓ 4,830 Permanent Jobs; and
- ✓ \$13.1 million in State Fiscal Revenue.

Texas is currently able to meet only about 36.0% of its mobility needs each year, and congestion is on a significantly increasing trend in major metropolitan regions. This deficiency causes extensive losses in overall productivity, and the higher traffic concentrations hinder efforts to achieve acceptable air quality standards. The loss of substantial highway funds would only serve to make matters worse.

4) **Benefit-Cost Analysis**

In order to gain an overall perspective on the importance of achieving the requisite emission standards, TPG created two ten-year simulations of the consequences and costs associated with non-compliance. In the “low case” estimates, it is assumed that the lower bound in annual health losses is achieved and that there are no adverse economic development effects beyond the most directly affected sectors. The results of this analysis are presented below.





Ten-Year Simulation of the Aggregate Losses Associated with Non-Compliance with the Clean Air Act Amendments on Business Activity and State Fiscal Revenues in Texas Under a "Low Case" Scenario

Year	Total Expenditures	Gross State Product	Personal Income	Employment	State Revenues	NPV State Revenues
1	\$53.742	\$19.892	\$11.744	259,606	\$0.967	\$0.706
2	\$97.951	\$35.040	\$20.233	436,971	\$1.693	\$1.189
3	\$144.616	\$51.110	\$29.250	627,162	\$2.465	\$1.665
4	\$182.436	\$64.148	\$36.568	781,861	\$3.091	\$2.008
5	\$222.234	\$77.865	\$44.266	944,501	\$3.750	\$2.342
6	\$262.602	\$91.336	\$51.634	1,096,684	\$4.389	\$2.636
7	\$307.633	\$106.845	\$60.337	1,280,315	\$5.134	\$2.965
8	\$344.359	\$119.429	\$67.389	1,427,660	\$5.737	\$3.185
9	\$392.648	\$135.976	\$76.662	1,621,397	\$6.530	\$3.486
10	\$446.975	\$154.592	\$87.094	1,839,355	\$7.422	\$3.810
Cumulative Net Present Value (NPV) of State Revenue Losses						\$23.993

* Includes (1) Foregone Highway Construction and Associated Benefits, (2) Lower Bound Health Losses, and (3) Directly Affected Production Categories.

Monetary values are in Billions of 2002 dollars.

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group

Note that, on a present discounted value basis, the cumulative losses in State revenue (which would also continue beyond that point) total approximately \$24.0 billion. When compared with the incremental outlays required for the TERP incentives, the benefit-cost ratio is 63.8-to-1.

In the "high case" scenario, the upper bound of health losses is assumed, as well as economic development consequences which span the entire manufacturing sector. The ten-year findings under these conditions are exhibited in the table below.





Ten-Year Simulation of the Aggregate Losses Associated with Non-Compliance with the Clean Air Act Amendments on Business Activity and State Fiscal Revenues in Texas Under a "High Case" Scenario

Year	Total Expenditures	Gross State Product	Personal Income	Employment	State Revenues	NPV State Revenues
1	\$76.173	\$30.582	\$18.630	426,405	\$1.492	\$1.090
2	\$135.433	\$52.665	\$31.418	703,862	\$2.557	\$1.797
3	\$197.828	\$75.983	\$44.928	998,656	\$3.683	\$2.488
4	\$248.365	\$94.881	\$55.878	1,237,929	\$4.597	\$2.986
5	\$301.554	\$114.768	\$67.402	1,489,624	\$5.557	\$3.471
6	\$356.728	\$135.061	\$78.999	1,740,266	\$6.530	\$3.922
7	\$416.932	\$157.561	\$92.036	2,024,799	\$7.617	\$4.398
8	\$466.161	\$175.907	\$102.660	2,255,293	\$8.501	\$4.721
9	\$530.890	\$200.029	\$116.628	2,558,360	\$9.665	\$5.160
10	\$603.712	\$227.167	\$132.343	2,899,318	\$10.974	\$5.634
Cumulative Net Present Value (NPV) of State Revenue Losses						\$35.667

* Includes (1) Foregone Highway Construction and Associated Benefits, (2) Upper Bound Health Losses, and (3) Directly and Indirectly Affected Production Categories.

Monetary values are in Billions of 2002 dollars.

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group

In this instance, the net present value of fiscal losses to the State increases to \$35.7 billion and the benefit-cost ratio becomes 94.9-to-1. Furthermore, the economic dislocations seriously undermine the long-term stability and prosperity of Texas.

d. Synopsis

This exercise has examined in detail the potential setbacks to the Texas economy associated with failure to comply with the 1990 Clean Air Act Amendments. While the full brunt of the potential sanctions might be avoided, the risk is simply too great. The health of Texans, the quality of life, future business and export expansions, and improving mobility are all critically tied to meeting appropriate standards. Moreover, the potential losses permeate every sector and geographic area of Texas. The benefit-cost ratios effectively illustrate the need to achieve acceptable emission levels, and the negative economic development implications of poor air quality in an increasingly technological environment are indeed profound.

Texas is not alone in dealing with these issues, and there are no easy answers. Compliance efforts are expensive and often unpleasant and, if not carefully managed, could lead to a competitive disadvantage in attracting new industry. On the other hand, a fair, innovative, and efficient approach will be





well perceived, and there are definite benefits to a clean environment in locating desirable facilities. Striking an appropriate balance is critical to future performance. In any case, the findings from this evaluation are a “no brainer.” Texas must comply with the Clean Air Act Amendments as a prerequisite to sustainable prosperity.

2. Water Quality (and Quantity) Issues

Issues regarding the water Texans drink are no less controversial and certainly no less critical than those related to the air Texans breathe. The consequences of the recent drought have been widely chronicled, and a dispute with Mexico over water supplies has garnered headlines and significantly impacted the relationship between Texas and its southern neighbor. Recent proposals run the gamut from desalinization of water from the Gulf of Mexico to privately-funded pipelines. It has often been said that, in Texas, “Whiskey is for drinkin’; water is for fightin’.” Truer words were never spoken.

The fact that water scarcity and quality are major issues for Texans is beyond dispute. Texas boasts an estimated 191,228 miles of streams and rivers (21% of the rivers have continuous flow over the course of a given year). In addition to rivers and streams, there are 3,879 square miles of Gulf water with a 624-mile coast. Further, Texas has 1.7 million acres of coastal wetlands, and more than six million acres of inland wetlands. There are an estimated three million acres of reservoirs in Texas as well.

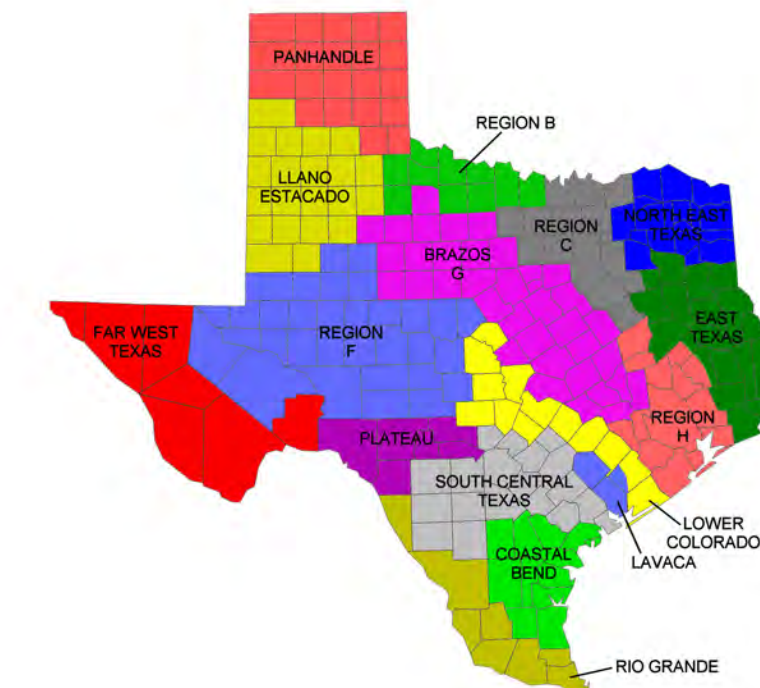
Reservoirs are of major importance, as they provide approximately 96% of the surface water used in Texas. In fact, there is only one major natural lake in Texas (Caddo Lake); however, there are 6,700 lakes constructed as reservoirs. Many of the larger reservoirs also serve as catalysts for substantial recreational and tourism activity, thus bringing benefits to nearby local economies. Additionally, groundwater is found in aquifers throughout the state. Currently, Texas has nine primary aquifers and twenty minor aquifers. According to estimates from the Texas Water Development Board, groundwater supplies more than half the water consumed in Texas. However, reliance on groundwater has declined in recent decades. For example, in 1974, 70% of all water used in Texas was groundwater, while in 1996, only 56% of water consumed was groundwater.





The Texas Water Development Board has responsibility for planning and allocating funds to ensure that Texas maintains adequate water supplies to meet its demands. Every other year, the Texas Water Development Board updates a State Water Plan, which estimates the amount of water resources needed. (The Perryman Group actively participates in this process.) Managing water resources also extensively involves the river authorities that administer the major watersheds in the state, and local governments are actively engaged in the process. The Water Development Board has divided Texas into sixteen regional water planning areas.

Texas Water Planning Regions



There is much disparity in the availability of water among various regions of the state. These differences reflect both geological and climatological factors inherent to the areas and the level of resource management that has occurred in the past. Moreover, the development of new water resources typically has some level of conflict with environmental interests, as it almost invariably involves a restructuring of land use and habitats.

It is projected that there will be sufficient water supply to meet future municipal and industrial demands assuming that Texas continues to take steps to improve water





development and conservation. However, if present trends continue, the Texas water supply will fall short of irrigation demands. Thus, creative and innovative approaches must be explored and implemented on an ongoing basis. While recent rainfall has eased near crisis conditions in some parts of the state, such fortuitous circumstances cannot be relied upon on a continuing basis.

Water quality is, of course, a parallel concern. Unfortunately, it is exceedingly difficult to determine the quality of water in Texas. The Texas Department of Environmental Quality (formerly the Texas Natural Resource Conservation Commission) administers the Safe Drinking Water Act through monitoring the drinking water quality in Texas. The agency also determines the water quality of all rivers, lakes, reservoirs, bays, and other bodies of water in Texas. Water quality is closely associated with water supply. For instance, recently some water that Texans formerly relied on from reservoirs failed to meet federal standards for use, leading to a decline in the quantity of water available. In short, a clean and adequate water supply is necessary for economic development and the quality of life in Texas. Effective planning can make water a vital element of economic advantage; lack of water of sufficient quality can have the opposite effect.

With regard to air and water, proper planning and achieving a reasonable and fair balance of interests is critical. Similar issues arise in land-use planning as well, as most types of development have some consequences for habitats or other aspects of the ecosystem. By offering an efficient and predictable system of regulation, Texas can both facilitate responsible growth and achieve the competitive benefits afforded by a clean environment. On the other hand, failure to adhere to federal guidelines or to meet basic quality standards can have both disastrous economic consequences and be detrimental to human health.

C. Tax Policy

One of the most obvious ways states influence their overall business climate is through tax policy. Everyone recognizes that providing for schools, infrastructure, public health and safety, an effective regulatory framework, and other essential government functions involves costs that must be recouped. **The objectives are to be fair and equitable in allocating**





fiscal burdens and to be prudent and efficient in the use of public resources.

Texas has a relatively low per capita tax burden. While this characteristic is generally regarded favorably, it is also important to ensure sufficient revenue to meet the needs of a growing economy through funding mechanisms that expand in accordance with requirements. The state also prides itself on the absence of a personal income tax, which is again viewed positively by firms seeking new locations (although it is perceived much more positively internally than externally).

Despite these positive attributes, the **Texas tax structure is typically ranked near or below the middle among all states in attractiveness for new business activity** and is not particularly well regarded by site selection consultants. There is also notable concern within the state regarding both (1) the adequacy of the public school finance system and (2) the mechanism by which school funding is achieved. Because this segment of state and local government budgets is large in absolute and relative magnitude, alternatives can only be explored within the context of overall fiscal reforms. Finally, Texas currently relies on such mechanisms as (1) a property tax, (2) a sales tax that applies primarily to goods at a time when consumption is shifting more toward services (and Internet purchases), (3) a franchise tax partially based on the capital stock of firms, and (4) an oil and gas severance tax in an era of gradually declining production. Thus, the current tax structure is not well suited to increase in line with either the expansion of the economy or the accompanying revenue requests. These issues are examined in more detail below.

1. Poor Perception of the Texas Tax Structure

A major reason for the relatively poor perception of the Texas tax structure is the fact that it places a greater relative burden on capital-intensive firms than those in competing areas. Approximately 60% of state and local taxes in Texas are paid by businesses, whereas most competing states have roughly an equal division between businesses and households. Among the 10 most populous states in the US, only Florida (which also lags in new locations) collects a comparably disproportionate percentage of taxes from the corporate sector. As a further complication, the Texas franchise tax is partially levied on the capital assets of a company, thus





creating substantial liabilities for capital-intensive enterprises irrespective of their economic performance.

By far, the most significant segment of this imbalance occurs as a result of the heavy reliance on property taxes to fund much of the county, municipal, and (especially) school district activity. Almost half of all state and local taxes are based in some manner on the value of assets, with the burden thus being weighted toward firms with large, expensive facilities. Although manufacturing and utilities represent only about 26% of gross state product, these sectors pay well over half of all business property taxes.

The bottom line is that **the tax consequences of locating a large facility in Texas have material adverse effects.** As noted earlier, this phenomenon has been documented in several studies and is widely known in the economic development and site selection community. (In the 2001 Legislative Session, House Bill (HB) 1200 created a partial offset to this disadvantage for new facilities meeting certain criteria. This measure will be discussed in more detail later in this report.)

2. School Finance Issues

School finance, and with it the entire tax structure of Texas, is also a fundamental factor presently confronting state government. Demographic patterns in the state only amplify the importance of funding, in that 70,000 net new students are added to the system each year with a disproportionate concentration from educationally and economically disadvantaged households. A framework for considering this issue was recently developed by The Perryman Group to examine various avenues available for potential reform. Some of the findings from this analysis are summarized below.

As noted above, Texas has traditionally relied heavily on local property taxes to fund public schools. As community development patterns evolved toward affluent suburban areas in the 1970s and 1980s, extreme variations surfaced in the resources available and educational opportunities offered to students around the state. Legal challenges to the system and general concern over equity issues led to the creation of the present “Robin Hood” plan in which a portion of the revenue from “property-wealthy” districts (also known as



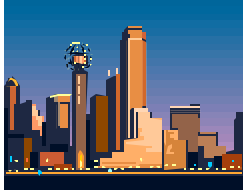


Chapter 41 districts) is “recaptured” and distributed to “non-property-wealthy” districts (also known as Chapter 42 districts). The plan also caps local property tax rates for maintenance and operations (excluding debt service) at \$1.50 per \$100 valuation. (There are some minor exceptions to this rule, but they are not material to the overall analysis.) This transfer now amounts to over \$600 million per annum.

Even among those who originally crafted it to meet judicial mandates, Robin Hood was never regarded as an optimal long-term solution to school finance in Texas. Nevertheless, it may be regarded as a limited success in the sense that the state now has one of the most equitable school finance systems in the entire country in the sense of approximately equivalent governmental funding per student (although some modest widening of disparities has occurred of late). Difficulties are presently occurring on a significant scale, however, in that many districts, including property-wealthy areas, are at or approaching the rate ceiling. Consequently, the overall level of resources to fund the system as costs increase is proving to be inadequate. Many districts with rising property values find their residents facing much higher taxes which are recaptured into the Robin Hood system, often leaving inadequate resources to fund their own enrollment growth. Non-property-wealthy districts are also facing resource constraints and difficulties in maintaining programs, particularly in rural areas. The percentage of school revenues derived from local sources (as opposed to State revenue) has risen substantially in recent years, and litigation regarding the constitutionality of the system is again being vigorously pursued. When combined with escalating needs and fiscal requirements, the issue is again reaching crisis proportions.

These concerns have led many educators and taxpayers to demand that (1) Robin Hood recapture be reduced or eliminated, (2) overall property tax relief be granted, and (3) more aggregate funds be made available to pay for public education. Progress on any of these fronts obviously requires that alternative sources of funding be found. (Although not as widely discussed, there may also be opportunities to reduce costs or at least the rate of growth in costs through enhanced efficiencies and greater deployment of technology. It is unlikely that significant savings can be achieved in the immediate future, but this possibility is clearly ripe for long-range discussion and exploration.)





3. Education as a Public Good

Whenever the public sector requires additional fiscal resources for any purpose, it must remove them from circulation among business and households in the private market. Such extractions clearly reduce activity in the private sector, but are justified when the benefits to the population exceed the value of the levies. Because the gains to society of educated citizens exceed the private gains to individuals involved in the education process, schooling would likely be underconsumed in a market environment. Thus, education is a public good which is properly provided by government and funded through taxation. This fact has been recognized and accepted for more than two centuries.

As with any public good, the resources obtained from private sources to support education should reflect considerations of flexibility, growth potential to meet future needs, efficiency, and equity. The state and local tax system in Texas has evolved over an extended period of time and embodies many long-forgotten exigencies and compromises. While it is extraordinarily cumbersome in places and likely far from anything that would emerge from a laboratory experiment to design a perfect structure, the tax system as it has evolved over time has served the needs of the state through numerous changes and challenges. Given the complexity of the tax environment, the unintended and often severe dislocations which can occur when it changes, and the myriad interests surrounding it, a sudden and drastic overhaul seems improbable and ill-advised. Nevertheless, the quest for a more suitable approach to school finance also affords an opportunity to thoughtfully examine the overall framework and perhaps make significant early steps toward a more balanced fiscal system to address the expanding revenue requirements brought on by demographic and economic growth.

Alternative Sources of Funds for Schools

The current property tax system is used as a base for comparative purposes. It is assumed that any additional revenue will be used to (1) replace or reduce Robin Hood recapture, (2) reduce property taxes, and/or (3) provide additional school funding. Thus, if the new revenue sources have superior characteristics relative to property taxes, their adoption represents an improvement in the overall system.





Issues such as *growth* and *flexibility* are assessed using the inherent properties of the levies and growth projections in the relevant bases derived from the Texas Econometric Model. *Efficiency* is defined in terms of the total loss in economic activity from the imposition of a \$1 billion tax of each type considered. (The amount was chosen purely because it is a “round” number which facilitates index construction. The same principles apply irrespective of the amount allocated to new funding or property tax relief.) Thus, a tax is viewed as relatively more efficient than another if it claims fewer private resources from its implementation at a common revenue level.

Multiple indicators of foregone activity (expenditures, output, income, and jobs) are calculated using the Texas Multi-Regional Impact Assessment System on a detailed industrial basis. Because the focus of economic development is typically on output (gross state product) and jobs, these two measures are used to derive an “efficiency index” with property taxes assigned a value of 100. Because of different value-added and labor-intensity factors in various industries, some taxes show losses in some activity measures and gains in others. (Efficiency in collections is noted, although it is not likely to be a highly significant issue.)

Equity in the present context refers to fairness in the allocation of tax collections across the various sectors of the economy. It is defined as paying a share of taxes equal to the corresponding share of real gross state product in each industrial sector. An index is created based on statistical variance from this norm, with the property tax again being set at 100.

With regard to the taxes examined, this exercise is restricted to major potential revenue sources. While some additional funds could be found by tweaking various minor levies, they would not be sufficient to materially impact school finance or address key issues presently surfacing regarding overall fiscal requirements. A motor fuels tax increase (which would be allocated 75% to transportation and 25% to education) is also not examined in detail. While it would generate a notable increase in funds (probably somewhat less than \$200 million per year assuming a \$.05 per gallon increase), it is not enough to offset Robin Hood or add even 1% to overall funding. This issue is explored in more detail in a subsequent discussion of highway infrastructure.





The analysis specifically considers the property tax (as a base), the sales tax, a business activity (value added) tax, the franchise tax, a gross receipts (or transactions) tax, and (just for grins) an income tax. If either of the new business taxes (business activity or gross receipts) were to be imposed, it is assumed that a modest dollar-level exemption would be incorporated. This approach would eliminate the vast majority of potential firms from taxes with relatively minor revenue consequences and greatly facilitate collections.

A state property tax (which has been discussed but would require a constitutional amendment) is also not considered separately. Although there could be some efficiencies gained in collections, such a tax would have virtually identical overall economic impacts (and net distributional consequences) as the current system.

It should also be noted that this analysis is conducted based on the initial incidence of the tax as opposed to the final incidence. This approach stems from three basic considerations. First, final incidence is impossible to measure with available data, as it literally changes moment-by-moment in response to supply and demand conditions in a multitude of markets. Second, public policy debates (and lobbying activity) are inevitably framed around initial incidence. Third, individual and corporate decision-making regarding locations and investments tends to be shaped by initial incidence. At a broad level, studies indicate that direct taxes on business tend to ultimately break out as (1) 65%-70% being passed on to consumers in some form (predominately higher prices), (2) about 25% being passed on to workers through lower wages and benefits or reduced hiring, and (3) 5%-10% being absorbed as lower profits or returns on investments. Since workers in Texas are also normally consumers in Texas, the practical effect is that 90%-95% of business taxes are passed through in some form, although export-oriented firms tend to shift a greater percentage to persons outside the state (and country).

As a final observation before reviewing specific revenue options, the analysis will focus on the costs to the private sector of withdrawing \$1 billion through various mechanisms. In reality, the losses would be offset to a considerable degree by the spending on education by the public sector. (In fact, if the spillover benefits of education to society are included, the benefits likely exceed the costs.) Nonetheless, these gains





will be identical irrespective of the source of the funds and, thus, do not affect the relative efficiency or equity of various revenue options and are not a part of the current analysis. Each of the relevant taxes is presently examined.

a. Property Tax

Property taxes have been the mainstay for school finance for several decades, but it appears unlikely that they can continue to play this role effectively. The base of this levy, the assessed value of taxable property, is an unstable source of growth for revenues. While long-term increases have occurred and are anticipated for the future, the pace lags well behind that of other potential funding mechanisms. Over the past 20 years, the base has risen by 72% as compared with gains of over 250% in other fiscal sources. In fact, during an extended period from 1985-1995, the property tax base actually fell, while other measures rose by more than 60%. Over this same period, average property tax rates more than doubled. Although values have recovered in recent years, the rate of increase remains only about 60% as high as alternative bases. The tax also suffers from the fact that increased property values often bear little relation to financial liquidity and, thus, ability to pay.

The Perryman Group is presently projecting that property values will continue to expand in the future, but at a pace well below that of overall business activity. Moreover, while it is unlikely that another 10-year stagnation will occur, property values are subject to less predictability and more prolonged cycles than the economy as a whole. The timing of property value fluctuations also shows little correlation with revenue requirements. Similarly, the rate of appreciation varies markedly across areas, thus adding uncertainty and complexity to the funding process.

For comparative purposes in measuring efficiency, the estimated impacts of a hypothetical increase of \$1 billion per year in **property taxes** on the private economy in Texas is a reduction of

- ✓ \$2.787 billion in annual Total Expenditures;
- ✓ \$1.289 billion in annual Gross State Product;
- ✓ \$0.747 billion in annual Personal Income;
- ✓ \$0.326 billion in annual Retail Sales; and
- ✓ 21,839 Permanent Jobs.





In terms of its claims on private resources, the **property tax is relatively efficient** in comparison to other levies. Because of the complexity of the appraisal process, particularly for business property, it is approximately twice as expensive to administer per dollar of collections as other revenue sources.

The **property tax ranks last among the various alternatives in equity**. Agriculture pays about 5.2 times as much in relative terms as its contribution to gross product, and Transportation, Communications and Utilities (TCU) pays about 2.0 times its output share. Manufacturing and Mining also pay significantly disproportionate shares, thus hindering the state in its quest for new business locations.

Because the property tax ranks last in growth potential and equity among major potential levies, it would seem appropriate to diminish its relative importance in the school finance structure over time. The fact that many districts are now at or near the cap in their rates only magnifies this problem and further limits flexibility.

b. The Sales Tax

The state sales tax in Texas is currently at 6.25%, with local governments raising the levy to 8.25% in most major markets. This rate is among the highest in the US, although the base has many exemptions. If all such exemptions were eliminated, it would generate sufficient revenue to replace the property tax entirely. There are many elements of sales, however, which will likely remain not subject to taxation for reasons of regressivity (such as food-at-home and medicine) or practicality (such as advertising). The sales tax base is projected to grow well in excess of the property values and generally in line with (slightly below) other overall economic aggregates. The lag likely reflects a modest shift in consumption toward non-taxable services and increased sales activity through the Internet.

Because of potential variation in the rate and the base, there are myriad possible combinations of increases. For purposes of the present analysis, a hypothetical \$1 billion increase is simulated which consists of approximately \$500 million from increased rates and \$500 million from a generic expansion of the base in the service sector. The overall losses to the private sector from this withdrawal would be





- ✓ \$2.888 billion in annual Total Expenditures;
- ✓ \$1.400 billion in annual Gross State Product;
- ✓ \$0.849 billion in annual Personal Income;
- ✓ \$0.405 billion in annual Retail Sales; and
- ✓ 25,735 Permanent Jobs.

With regard to efficiency, the **sales tax claims more resources than the property tax, particularly with regard to jobs**. The sales tax exhibits considerably **greater equity**, with the most significant penalties being in Construction (with tax collections at 2.2 times the relative level of real gross product), Manufacturing (1.4 times), and Mining (1.3 times).

c. The Business Activity (Value-Added) Tax

One potential alternative tax not presently levied in Texas is the business activity or value-added tax. This levy has been discussed in prior legislative sessions, and is similar in principle (but not identical) to the current single business tax in Michigan (which is highly regarded for its fairness). It essentially taxes the difference between revenue and the cost of purchased items and is conceptually quite similar to a tax on nominal gross product. The current gas utility tax in Texas is collected in essentially this manner. Assuming an exemption for small business is included, it is very straightforward to administer compared to the franchise tax. Moreover, the base is expected to grow in line with the general economy and slightly faster than many other non-property tax sources. One desirable characteristic of the tax is that it does not substantially alter economic decision-making; companies will generally try to maximize value-added irrespective of an “after-the-fact” tax.

The impact on the private sector of a hypothetical \$1 billion business activity tax levy would be activity reductions of

- ✓ \$2.893 billion in annual Total Expenditures;
- ✓ \$1.422 billion in annual Gross State Product;
- ✓ \$0.838 billion in annual Personal Income;
- ✓ \$0.291 billion in annual Retail Sales; and
- ✓ 23,406 Permanent Jobs.

In terms of efficiency in the diversion of private activity, the **business activity tax is more efficient than the sales tax but less than the property tax**. Its **efficiency properties are far superior to any other levy examined** in this report,





with the ratios of relative taxes to relative output being less than 1.2 for all sectors.

d. The Franchise Tax

The principle method by which Texas currently taxes business at the state level is the corporate franchise tax. It is based on either the capital stock or net income of the company. One proposal that has been widely discussed is to modify the structure to include unincorporated enterprises. As presently implemented, the tax can be avoided by changing organizational form, and many firms successfully reduce or eliminate their liability (to the point that tax professionals often refer to the franchise tax as “voluntary”). Expansion in the base of the tax is projected to slightly exceed overall economic growth and to fall in line with future revenue needs.

Assuming a \$1 billion hypothetical franchise tax increase is achieved through a mixture of modifying the base and increasing the rate, the aggregate negative effect on private sector is estimated at

- ✓ \$2.846 billion in annual Total Expenditures;
- ✓ \$1.341 billion in annual Gross State Product;
- ✓ \$0.777 billion in annual Personal Income;
- ✓ \$0.273 billion in annual Retail Sales; and
- ✓ 21,483 Permanent Jobs.

The franchise tax is only slightly less efficient than the property tax and superior to several other revenue alternatives according to the relevant criteria. Its provisions related to capital cause it to be **moderately less equitable than some of the other sources, although it is much more balanced than the property tax**. The most disadvantaged sectors are Manufacturing (with a 1.7 ratio of relative taxes to relative real gross product) and TCU (with a 1.3 ratio). The levy on capital is also not specifically related to ability to pay in a given period and is a detriment to site selection.

e. The Gross Receipts Tax

The gross receipts tax is levied on the total revenues of a firm. It is conceptually equivalent to a transactions tax (a tax each time money changes hands), differing essentially only in the point of collection. If small business exclusions are implemented, the tax is relatively easy to administer. If this





type of funding were implemented, there would likely be intense political pressure to exempt certain categories of goods and services. The gross receipts tax has previously been examined in Texas (the Telecommunications Infrastructure Fund is essentially such a tax on a single industry), and Washington uses it (with varying rates for industrial sectors) as its principle form of business tax. The growth in the base generally tracks overall economy activity. One drawback of the tax is the tendency toward “pyramiding” in that the tax is collected at each stage of the production process. It also is subject to problems associated with discounting, as lower prices may drive higher gross receipts yet lower per unit profits.

A hypothetical \$1 billion gross receipts tax would reduce aggregate private sector activity as follows:

- ✓ \$2.756 billion in annual Total Expenditures;
- ✓ \$1.280 billion in annual Gross State Product;
- ✓ \$0.740 billion in annual Personal Income;
- ✓ \$0.236 billion in annual Retail Sales; and
- ✓ 20,045 Permanent Jobs.

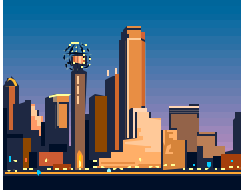
This levy exhibits the **most efficient use of revenues of all revenue sources considered**. Its **equity properties are also reasonably good**, although well below those of the business activity tax. In particular, Mining (with a tax percentage almost 2 times its output percentage) and Retail Trade (with a corresponding rate of 1.6) are disadvantaged by this approach.

f. The Income Tax (Just for Grins)

The absence of a state personal income tax is considered to be virtually a right of citizenship in Texas. Such a tax has little political support and requires a vote of the public for implementation. Although recent surveys have indicated somewhat more tolerance than in years past, it is highly improbable that an income tax will receive serious consideration in the legislative process. Nonetheless, it is appropriate to include it in the present analysis for comparative purposes and, as it turns out, to provide still another rationale to avoid it.

The base of the tax grows generally in line with (slightly below) overall business expansion, and administration is





relative simple (particularly if it is tied to the federal levy). The vast majority of states collect this tax, and the lack of a personal income tax in Texas is often cited as an advantage in economic development.

A hypothetical (purely hypothetical) income tax of \$1 billion leads to an overall decrease in private business performance of

- ✓ \$2.805 billion in annual Total Expenditures;
- ✓ \$1.374 billion in annual Gross State Product;
- ✓ \$0.832 billion in annual Personal Income;
- ✓ \$0.527 billion in annual Retail Sales; and
- ✓ 27,565 Permanent Jobs.

The income tax is the least efficient of all the funding sources considered. In other words, levying an income tax removes more private resources from productive use than any other major potential revenue source. Given that the tax is paid entirely by individuals, it is impossible to provide an equity measure that is strictly comparable to those computed for the alternatives previously examined. In order to make a reasonably similar construct, it is assumed that the revenues derived from income earned in each sector impacts the corresponding cost structure of relevant firms. Because income taxes directly affect “take home pay,” it is reasonable to assume that workers will seek to negotiate additional compensation from their employers to offset the tax. This pattern is observed in other states. The results of this analysis reveal that the personal income tax has equity properties which are in line with several of the alternative sources. In any case, the overall characteristics of the income tax are less attractive than those of several other potential funding mechanisms.





g. Synopsis

The chart below summarizes key findings for this analysis.

Synopsis of Indicators of Relative Performance of Alternative Revenue Sources			
(Property Tax=100 in all cases)			
Revenue Source	Growth Index (Higher Values Reflect Greater Growth Potential)	Efficiency Index (Lower Values Indicate Greater Efficiency)	Equity Index (Lower Values Indicate Greater Equity)
Property Tax	100.0	100.0	100.0
Sales Tax	123.9	113.2	61.0
Business Activity Tax	125.9	108.7	17.4
Franchise Tax	126.8	101.2	66.2
Gross Receipts Tax	124.4	95.5	57.8
Personal Income Tax	125.7	116.4	61.6

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group

Not surprisingly, no single measure emerged as optimal across all criteria. Moreover, the relative weights to be given to growth, efficiency, and equity are largely a matter of individual preference. Overall, **it appears that the business activity tax provided the best combination of attributes**, while franchise tax expansion (particularly if the portion based on capital assets were diminished) and gross receipts levies also merit further consideration. Some type of hybrid approach containing elements of various measures is also possible, although it could add to administrative complexity.

It should also be noted that any effort to fundamentally change the school finance structure, even incrementally, would be the subject of intense debate and controversy. There are winners and losers in every potential modification. The issue will also inevitably have to be balanced with other fiscal priorities and overall patterns in tax policy. Nonetheless, this assessment clearly points to numerous options which could enhance the overall equity, efficiency, and ability to respond to increasing fiscal needs beyond the current public education funding mechanism. These alternatives are clearly worthy of further discussion and consideration as the process of reforming and expanding school finance unfolds. It is incumbent upon the state to have a fair and equitable tax system as part of the overall business climate.





D. Infrastructure

A key factor in the competitiveness of any area is the quality of its infrastructure. In fact, infrastructure may be viewed as the public goods that knit a society together, thus allowing its various mechanisms to efficiently interact. From railroads and telegraph wires to electric lines and highways to airports and telephones, Texas has consistently fostered the channels to facilitate commerce and progress. Accessibility, high-quality communications, and adequate and reliable power supplies are essential to efforts to promote economic prosperity in any area. Texas faces challenges and opportunities in all of these arenas, some of which are examined at present.

1. Transportation

Transportation has long been the lifeblood of society. In fact, civilization itself began on multiple continents in close proximity to large, navigable waterways. Early American progress is punctuated by wagon routes blazed across the rugged continent, and the history of Texas is filled with the lore (and profits) of legendary cattle trails. As the nation progressed, more sophisticated modes played pivotal roles in defining patterns of economic growth and development.

Texas is an excellent example of the critical nature of transportation. Major ports along the Gulf Coast form powerful links to the global economy. Large airports offer service to all parts of the planet; smaller ones connect every corner of this vast state into an integrated international system. Rail lines crisscross Texas and support a wide range of freight (and some passenger) transport and delivery. Multi-modal facilities, from simple switching sites to the likes of the Port of Houston and Fort Worth Alliance Airport, enable elaborate manufacturing and distribution networks.

Texas' Highway System

The core of the Texas transportation complex is its massive network of roads, ranging from multi-lane interstates to rural farm-to-market corridors. This system has greatly enhanced mobility and quality of life within the state, while contributing notably to business prosperity. In fact, over the past two decades, the productivity enhancements offered by this critical infrastructure have been responsible for approximately 5.6% of the total output growth in Texas. In constant dollars, this





stimulus translates into \$61.7 billion in aggregate spending and \$28.9 billion in gross state product.

Despite these enormous and undeniable benefits, the process of highway construction and maintenance has recently encountered mounting difficulty. The traditional “pay as you go” approach has served Texas well for many years, allowing residents and businesses to enjoy accessibility without jeopardizing future needs. At present, however, several factors are creating substantial strains on the system: (1) rapid economic growth, (2) significant population expansion, (3) exploding trade with Mexico and other countries, (4) increasing affluence among citizens, (5) concentrations of business and recreational activity in large urban centers, (6) increasingly integrated production and interactive production environments, (7) enhanced residential and commercial development in suburban areas located well beyond central business districts, and (8) rising levels of tourism. These forces have occurred simultaneously with pressing fiscal requirements in other areas, including education, law enforcement, environmental compliance, and social services.

The result of this confluence of events is that Texas is now only able to undertake about 36% of needed highway construction projects each year. The backlog increases congestion in metropolitan areas, limits economic potential, and threatens the viability of many rural regions. According to a recent traffic congestion study by the Texas Transportation Institute (TTI), commuters in the largest cities in Texas experienced an average of 34 hours of delay per month due to traffic congestion. According to the analysis, Houston is Texas’ most congested city, followed by Dallas, Austin, Fort Worth, and San Antonio. The TTI estimates that the total yearly cost of traffic congestion in the Texas urban areas studied amounts to \$4.4 billion. This figure is 7% higher than the congestion cost estimates in 1992. In other words, the problem is getting worse.

Traffic congestion brings about a host of problems. Increased fuel consumption, and, thus, environmental concerns relating to emissions can be associated with traffic congestion. Another result of such congestion is the inconvenience of loss of efficiency and increased costs associated with traffic. These considerations directly impact locations and, hence, economic development and prosperity.





Future development of major arteries is also a vital component of long-term potential. Interstate 35, sometimes known as the NAFTA Highway, connects from the Mexican border at Laredo through several major Texas cities and, ultimately, to Minneapolis. It is the principal route for trade with Mexico and faces significant capacity constraints which limit the opportunity to capitalize on emerging patterns in international commerce. The proposed Interstate 69 corridor links the eastern border markets with Houston and the major centers of consumer activity in the Northwestern United States. This route is essential to maximizing the multi-modal capabilities of the Port of Houston and more fully linking the trade capabilities of the state. The proposed extension of Interstate 27 in West Texas from Lubbock to Presidio, known as La Entrada al Pacifico, would open up substantial trade and distribution potential from western Mexico and, with parallel infrastructure development south of the border, Asia via the Port of Topolobampo.

Texas Highway Challenges

The challenges of providing adequate levels of accessibility in Texas are quite significant. Because of its vast size, the state has more lane miles of pavement than any other state. Drivers currently travel about 600 million vehicle miles per day on Texas roads, a rate that is increasing by 4.1% per year (with a disproportionate percentage of the growth being in trucks). At the same time, the capacity of the road system is only expanding by 0.35% per annum. Currently, there are only sufficient resources to fund 36% of critical highway needs (as previously noted), 40% to maintain the system at current levels of congestion, and less than 30% of an optimal network of roads. Texas ranks forty-seventh among the states in per capita highway spending and third in the greatest diversion of motor fuels tax revenues to other purposes. Moreover, it is quite likely that the shortfall of road development will persist into the future in the absence of specific initiatives. All of the factors noted above which contribute to this situation are ongoing, and federal highway funding appears likely to decrease at least to some extent.

Given this environment, Texas must evaluate future funding alternatives. There are several possible alternatives. Texas currently collects about \$6.5 billion annually in revenues related to highways (including the motor vehicle sales tax), but directs only about \$2.7 billion to highway construction and





maintenance. Overall highway expenditures are only about 8% of the state budget, as compared to 30% in the 1960s.

Potential Sources of Highway Funds

Any funds which are derived from motor fuel taxes or vehicle registration fees are constitutionally mandated to remain in the current “pay-as-you-go” funding system. Potential revenue sources of this nature include (1) eliminating the diversion of funds from vehicle registration fees to reimburse counties a fraction of motor vehicle sales taxes (prior to 1992, this amount was paid directly from the sales taxes), (2) eliminating the diversion of funds now used for non-highway programs (such as supporting unrelated activity of the Texas Department of Public Safety), (3) improving the efficiency of collecting motor fuels taxes (partially by collecting the tax at the “rack” where the product is initially distributed rather than the pump where it is ultimately delivered to the consumer), and (4) equalizing and/or increasing vehicle registration fees. These changes could add hundreds of millions of dollars per year to the basic highway program (although most of it would be diverted from other uses of general revenue, thus raising issues of funding priority).

Although it is always a difficult subject, an **increase in the gasoline and diesel taxes** (which have many of the characteristics of user fees rather than tax levies) of \$0.05 per gallon would generate about \$700 million annually for road construction. It is worthy of note that, due to enhanced fuel efficiency and inflation in construction costs, it now takes about 70% more miles traveled to generate the same level of construction funds as in 1991, when the last gasoline tax increase was enacted. Much of the revenue derived from the last increase has also been diverted to other purposes. Given the current state of the transportation system in Texas, this approach is worthy of serious consideration.

Some other options emanate from the recent passage of Proposition 15, an Amendment to the Texas Constitution which permits (1) new highway funding sources to be a part of the Texas Mobility Fund and used to support highway construction bonds and (2) the use of State funds as “toll equity” to develop roads which could be partially but not totally funded by toll levies. Potential existing revenues which could be used in the Mobility Fund include (1) relevant inspection fees, (2) license fees, (3) oversize vehicle fees, (4) record and





certificate fees, and (5) some portion of the motor vehicle sales and rental tax. In some instances, the costs associated with collection of these taxes are already being paid out of highway funds. In all cases, of course, these revenue sources would require a reallocation of general revenue, and, thus, must be balanced against other priorities.

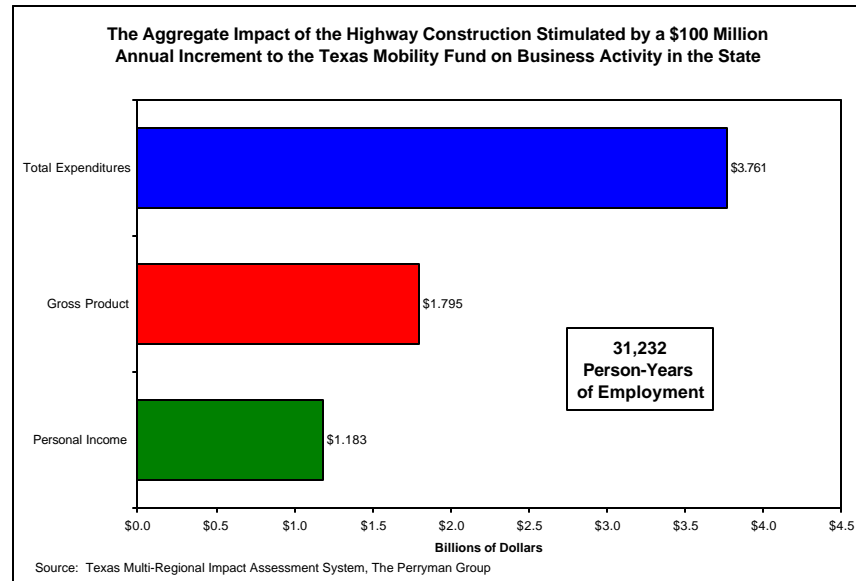
Texas Mobility Fund

The returns to investments in the Mobility Fund are quite significant due to the reduced costs and enhanced productivity associated with accelerated development of highway projects. For purposes of illustration, a scenario is examined in which \$100 million in added annual funding is made available. This level is selected because it is relatively small compared to the state budget (less than 2%), may be obtained from several identifiable sources outlined above, and is considered realistic by knowledgeable individuals in the industry and within State government. If a smaller or larger amount is ultimately allocated, the results will be affected in an approximately proportionate manner.

The incremental availability of \$100 million per year will support about \$1 billion in construction. Over the course of the three-year project period, the aggregate benefits of this activity to the Texas economy include

- ✓ \$3.761 billion in Total Expenditures;
- ✓ \$1.795 billion in Gross State Product;
- ✓ \$1.183 billion in Personal Income; and
- ✓ 31,232 Person-Years of Employment.

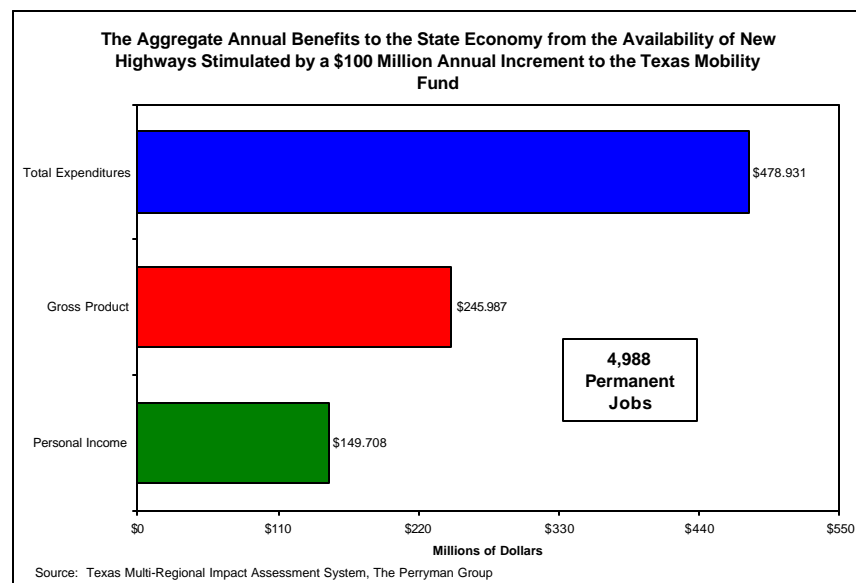


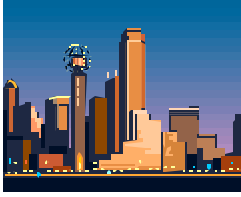


All monetary values are given in constant dollars.

Once the construction process is completed, the aggregate benefits (direct, indirect, and induced) associated with enhanced efficiency in a typical year are estimated to be

- ✓ \$478.9 million in Total Expenditures;
- ✓ \$246.0 million in Gross State Product;
- ✓ \$149.7 million in Personal Income; and
- ✓ 4,988 Permanent Jobs.





In order to assess the overall net benefits of this scenario, a 20-year time horizon is employed. This period is sufficient to allow for project development and implementation as well as the completion of all debt service and retirement. The benefits extend well beyond this period, but are not reported in the interest of conservatism. Moreover, continuing availability of the funds would permit additional roads to be built beginning in year 16 (after the initial debt is retired); this stimulus was also not included.

Over the relevant time span, aggregate direct, indirect, and induced economic benefits (expenditures) are estimated at \$9.596 billion on a net present value (discounted) basis. Total costs, including all foregone spending and governmental activity, are found to be \$3.349 billion. Thus, net benefits are \$6.147 billion, and the benefit/cost ratio is 2.78. Relative to “hard” costs (debt service and retirement only), the ratio is 7.80. This example clearly illustrates the stimulus to the Texas economy that may be expected from a meaningful commitment of new resources to the Texas Mobility Fund.

Toll Equity

Toll equity, the second major new type of highway funding made possible by Proposition 15, is also highly beneficial in that it provides opportunities for greater leverage of existing revenues and accelerated development of high priority projects. The limitations on the level of commitment to toll equity would permit approximately \$600 million to be used in this manner each year. Analysis of various corridors in major metropolitan regions and discussions with knowledgeable individuals indicate the existence of at least \$6.6 billion in needed projects that could be supported at a level of 50% or higher by toll collections, with additional initiatives likely.

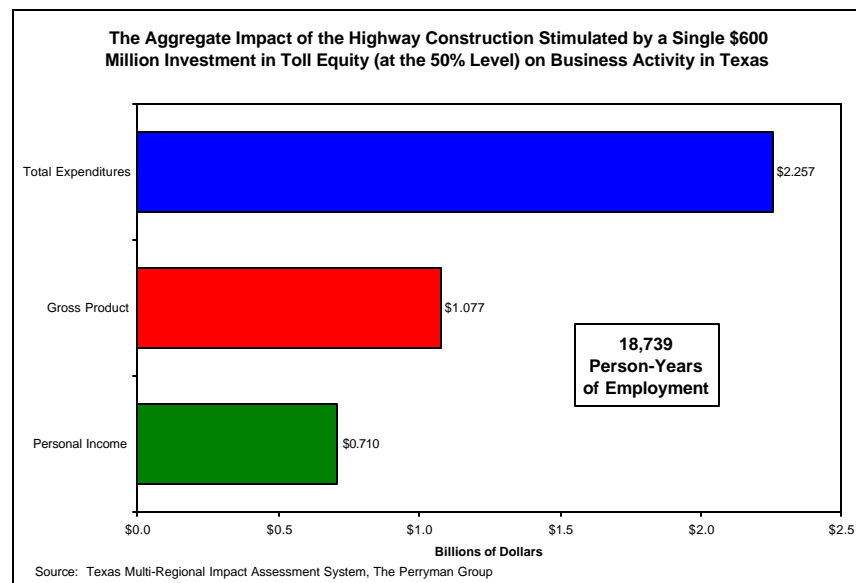
The information described above is sufficient to permit the formulation of a conservative scenario to evaluate the potential gains from implementing such a leveraging of limited state resources. It is assumed that the toll equity is 50% in each project, resulting in the effective generation of \$600 million in net new funds available each year. To the extent that many key roadways could be constructed with a smaller allocation of existing highway resources, the amount of new activity (and, hence, benefits) is further enhanced. Using this approach makes resources available for other important projects.





The aggregate impact of designing and building the facilities made possible by a single year of investment in toll equity is

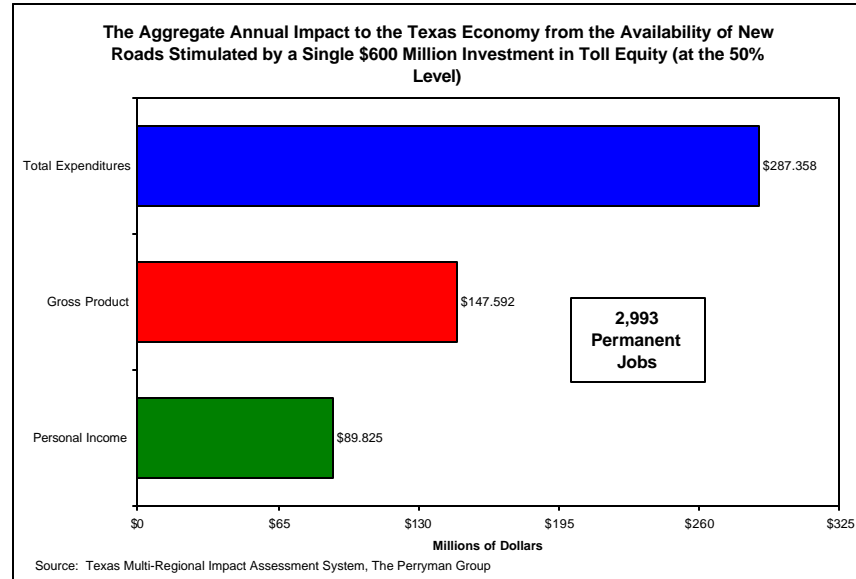
- ✓ \$2.257 billion in Total Expenditures;
- ✓ \$1.077 billion in Gross State Product;
- ✓ \$0.710 billion in Personal Income; and
- ✓ 18,739 Person-Years of Employment.



The overall incremental benefits once the projects made possible in a year by toll equity are completed include

- ✓ \$287.4 million in Total Expenditures;
- ✓ \$147.6 million in Gross State Product;
- ✓ \$89.8 million in Personal Income; and
- ✓ 2,993 Permanent Jobs.





When examined over a 20-year span, the composite gains from construction and enhanced efficiencies are \$5.757 billion on a discounted basis. The corresponding costs associated with toll payments for debt service and foregone consumption are estimated to be \$2.020 billion. Thus, the net benefit is \$3.738 billion and the ratio of benefits to costs is 2.85. The ratio relative to “hard” costs is 7.99.

As noted above, the ability to provide toll equity recurs each year, and there are sufficient feasible and needed projects to sustain investment for many years. For present purposes, it is assumed that the process continues for five years. In this instance, a 25-year horizon is considered in order to allow a sufficient time to retire all outstanding debt. Over this period, the discounted total benefits are \$31.084 billion, while the overall costs are \$9.733 billion. The net benefit is, thus, \$21.352 billion on a present value basis, with the benefits exceeding the costs by a factor of 3.19. When only “hard” costs are compared, the benefit/cost ratio is 8.63. These findings reveal that **accessibility and productivity can be substantially improved through a toll equity program**, with the added outcome of a notable stimulus to business activity.

Perhaps the most beneficial element of the new toll equity mechanism is that it facilitates the infusion of substantial private resources into highway construction, maintenance, and operation. The result is likely to be creative funding programs which can enhance our overall transportation system. As one example, the Trans Texas Corridor initiative





recently introduced by Governor Perry is largely made possible by this increased flexibility. One alternative used in some parts of the world is congestion pricing to improve utilization of infrastructure. Programs which are similar to those offered in electricity, telecommunication services, air travel, and other “peak load” sectors can be as simple as higher tolls during rush hour or as complex as variable tolls based on actual levels of congestion. Public-private partnerships based on such concepts may serve Texas well in the future.

Trans Texas Corridor

Because of its unique nature and massive scale, it is useful to briefly examine the Trans Texas Corridor concept. This innovative project seeks to change the nature of transportation in Texas by creating a multi-use, statewide corridor to move people, products, and information safely, efficiently, and effectively. The proposed Corridor calls for the construction of some 4,000 miles of new highway, high-speed and connected railways, with underground pipelines, electric lines, and telecommunication linkages along the same routes.

From Brownsville to Amarillo and El Paso to Texarkana, outlying areas, border communities, and major cities across the state would be uniquely linked together. This novel transportation infrastructure program would provide substantial economic benefits and create a notable competitive advantage for the state. The full project is projected to cost about \$175 billion and span several decades. Work on some of the highest priority segments of the Corridor has already begun.

Using the firm’s transportation models, The Perryman Group recently quantified the gains the Trans Texas Corridor could bring to the business activity within the state. The economic benefits of the program essentially stem from three sources. First, the construction of various forms of infrastructure (highway, rail, electric facilities, pipelines, etc.) will inject billions into the economy. Once the project is completed, the enhanced efficiencies for existing firms and consumers of improvements in mobility and access to infrastructure will lead to substantial economic stimulus. In addition, the economic development gains associated with attracting or retaining business activity as a result of becoming relatively more competitive provides the most important source of economic

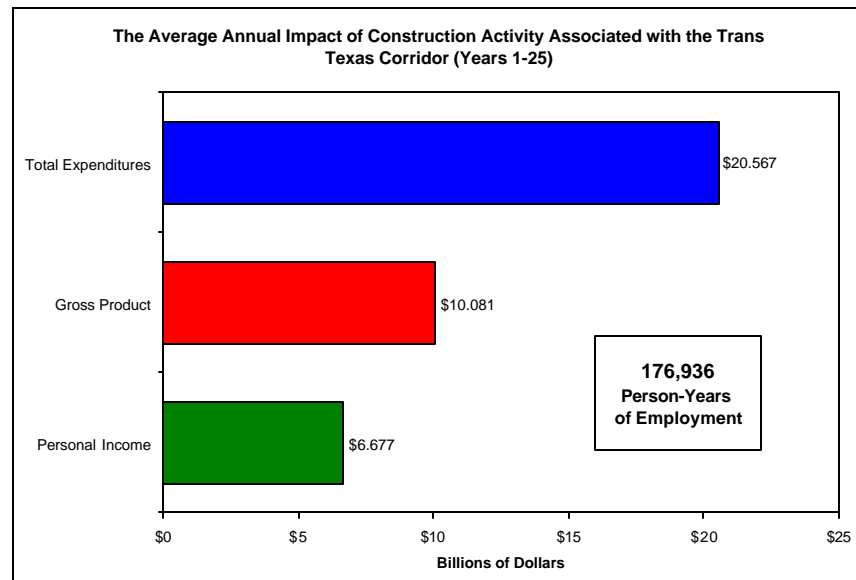




growth. Although not quantified in the present context, a multi-purpose right-of-way is also conducive to the timely adoption of new technologies (such as fully-functional magnetic levitation) as they become commercially available and a source of relative advantage in creating and stimulating new activity.

Using reliable estimates of specific costs per mile for each type of infrastructure, the average benefit per year from the construction activity over the first 25 years of the project is estimated to be (in constant 2001 dollars):

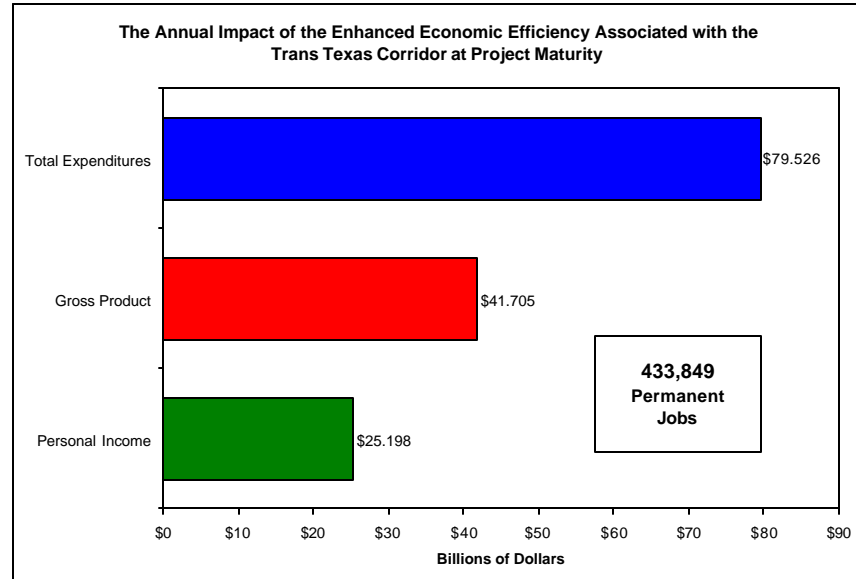
- ✓ \$20.6 billion in annual Total Expenditures;
- ✓ \$10.1 billion in annual Gross State Product;
- ✓ \$6.7 billion in annual Personal Income; and
- ✓ 176,936 Person-Years of Employment.



The enhanced efficiency associated with the notable infrastructure impacts will, at project maturity, yield permanent net gains of:

- ✓ \$79.5 billion in annual Total Expenditures;
- ✓ \$41.7 billion in annual Gross State Product;
- ✓ \$25.2 billion in annual Personal Income; and
- ✓ 433,849 Permanent Jobs.





The additional jobs are expected to be concentrated in the trade, services, construction, agriculture, and transportation segments.

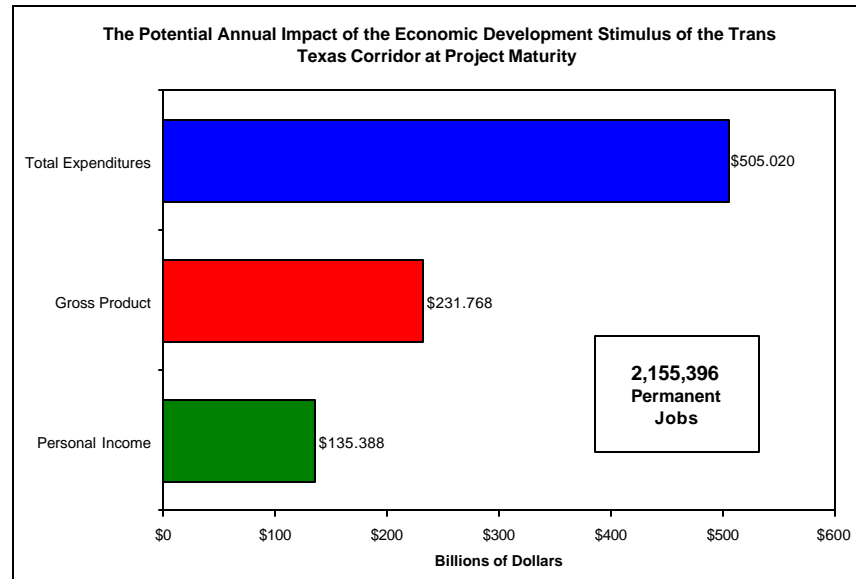
The economic development stemming from the project is by far the largest potential gain. To measure this effect, a detailed long-range baseline forecast for Texas and the US was created using The Perryman Group's econometric models. It was assumed that the state's share of US output would increase by 1% over the next several decades as a result of the enhanced infrastructure. This assumption is fairly conservative, given the nature of the investment, and is consistent with numerous tests for reasonableness.

The potential economic development gains accruing at project maturity include:

- ✓ \$505.0 billion in annual Total Expenditures;
- ✓ \$231.8 billion in annual Gross State Product;
- ✓ \$135.4 billion in annual Personal Income; and
- ✓ 2,155,396 Permanent Jobs.

These gains will be concentrated in the services; trade; government; construction; and finance, insurance, and real estate segments of the economy.





The Trans Texas Corridor project if fully implemented, will generate in excess of \$13 billion per year (upon complete implementation) in state revenues on an inflation-adjusted (constant-dollar) basis.

The proposed Trans Texas Corridor can provide significant benefits to the state through the construction of various forms of infrastructure, the enhanced efficiencies in mobility and access to infrastructure, and the economic gains associated with attracting or retaining business activity. Overall, nearly \$585 billion in annual expenditures will be generated at full implementation with approximately 2.6 million permanent jobs created.

The Trans Texas Corridor is a clearly an innovative approach to transportation, the type of out-of-the-box thinking that can spawn long-term economic vitality. Of course, there are still many matters to consider as the details of the plan are reviewed, but overall it is a win-win situation. Although this bold plan, like any other, is not without its obstacles, the same could be said in days past of D/FW International Airport, the Port of Houston, or, for that matter, the Goodnight-Loving Trail. Texas is at its best as a state when it strives to go beyond the structures of the past and chart a new course. The Trans Texas Corridor offers such an opportunity, and, thus, merits ongoing analysis and effort.





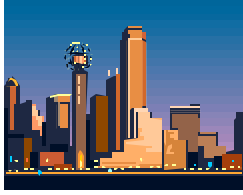
Grant Anticipation Revenue Vehicles

Before concluding this summary discussion of transportation infrastructure, it is appropriate to comment briefly on the use of Grant Anticipation Revenue Vehicles (GARVEEs), which have been the subject of much debate and attention. This program allows accelerated highway construction to be funded by expected future federal funding. There are serious drawbacks to this approach which make it inferior to the other methods described above. First, GARVEEs simply accelerate the use of existing funds; they do not add any net resources to the system. Nonetheless, the gains from building roads faster are sufficient to make the “cost-benefit” payoff appear positive at first glance. A second and more serious concern is that the funds are not assured for future years. Events such as the September 11 tragedy can dramatically alter national priorities; issues such as Clean Air Act compliance can put future funds at risk; and budgetary formulas such as the one currently in place can materially impact revenues from year to year. When facing such risks, it is proper procedure in cost-benefit analysis to “price” the uncertainty in the form of a risk premium on the cost of funds. The result is a higher discount rate for project evaluation than is normally used and a significant reduction in the calculated value of perceived gains. Thus, when properly computed, the cost-benefit rationale quickly disappears.

Highway Infrastructure Development Needs

The bottom line is quite simple. **Texas needs to accelerate the development of highway infrastructure.** It is essential for safety, environmental, and economic reasons. The payoff is obvious. The *annual* rate of return per dollar invested is 31.1% for major roadways and 27.9% for others (according to calculations using Texas-specific values for productivity enhancement and models devised by the US Department of Transportation). This imperative permeates the entire state. Urban areas face extreme congestion and issues related to hazardous materials and air quality; the border region has major difficulties accommodating the trucks that fuel our current growth; and rural areas often depend on expanded linkages for their very survival. Texas has several choices available, and effective leadership in balancing priorities is essential. The one choice that is not available is to do nothing.





2. Communications

In the economy of the emerging millennium, sophisticated communications is an indispensable requirement for successful economic development. There is nothing new in concept about this phenomenon. Johann Guttenburg, who brought printing to the masses of Western civilization five centuries ago, was selected as the “Person of the Millennium” over such luminaries as Isaac Newton, Martin Luther, Albert Einstein, Giotto, William the Conqueror, and Leonardo de Vinci. From printing to telegraph to telephones, the enhanced ability to effectively interact with one another has been instrumental in improving productivity, market efficiency, and other elements of overall social and economic progress.

With the advent of digital technology and the Internet, the synergy between communications and business development has been once again redefined. Indeed, the rise of the Internet and broadband communications has revolutionized many facets of society. Instant access on a global basis and enhanced capacity to share, process, and transmit information have, in a remarkably brief span of time, changed virtually every aspect of economic and personal interaction.

Importance of Broadband Access

It is no exaggeration to say that broadband access and advanced telecommunications services have become a new form of infrastructure—an essential ingredient to ongoing competitiveness. Internet use is strong in some Texas cities. In 2001, one major study found Austin-San Marcos and Dallas to be among America’s twenty “Most Wired Cities,” ranking third and seventeenth, respectively. This study also cited governmental data indicating that Austin-San Marcos had the highest percentage of households online with 69.7% in 2001. Dallas ranked 9th in percentage of households connected with 58.4%.

Despite these encouraging statistics, the rate of Internet use in Texas lags the national average. According to the September, 2001 Current Population Survey (CPS) conducted by the US Census Bureau, 54% of Americans use the Internet. Results from the same survey estimate that about 51% of Texans use the Internet.





Not surprisingly, recent trends suggest that Internet use is increasing universally. Despite this pattern, however, the “digital divide” persists due to differential knowledge of and access to computers, the Internet, and other information technologies based on factors such as race, education, and socioeconomic status. The CPS found that 75% of people in households with income less than \$15,000 and 67% of people in households with income levels between \$15,000 and \$35,000 do not use the Internet. Despite the recent 30% rate of increase in Internet use among Hispanics, 68% of all Hispanics and 86% of households where Spanish is the only language spoken do not use the Internet. Sixty percent of adults (25 and over) with only a high school education and 87% of adults with less than a high school education do not use the Internet.

The demographic mix of Texas, per capita incomes below the national average, and a relatively high percentage of adults not completing high school all contribute to challenges in the full integration of advanced communications technologies into the state economic complex. This task is further complicated by vast expanses of sparsely populated rural land and communities of low income households along the Texas-Mexico border and in several inner-city areas. In fact, a recent legislative study in Texas identified broadband access as the single most important issue shaping the future of rural Texas. Its critical nature was also noted in an analysis by the Public Utility Commission of Texas (PUCT). Similar conclusions have been reached in numerous other states and apply equally to the communities along the border. If universally deployed at reasonable prices, high-speed Internet connections facilitate remote availability of many key medical services, expedite the delivery of outstanding educational opportunities, and extend the reach of many other services essential to sustainable communities. Moreover, broadband capabilities both (1) make it possible for more firms to locate in less populous areas, thus opening opportunities to redefine local economies, and (2) enhance the efficiency and competitiveness of existing industries, thereby allowing them to remain, expand, and prosper in smaller, more remote communities. With regard to the border region, broadband access also greatly enlarges the universe of companies that could potentially take advantage of the cost savings afforded by proximity to Mexico and major trade corridors.





Thus, the infrastructure of the “new” economy offers the basis for a renaissance in the fortunes of many of the least advantaged segments of Texas. Closing the digital divide is tantamount to securing the opportunity for a long-term positive future for a substantial portion of the state. It is not a guarantee, but it is a realistic chance for economic success.

Obstacles to Implementation of Broadband Technology

In an eerie reprisal of days gone by, the implementation of broadband technology in rural and border areas faces formidable obstacles. Like electricity and basic telephone service in another era, lack of population density in many regions, relatively low per capita incomes, and the absence of substantial commercial and industrial concentrations result in demand levels which are inadequate to justify the needed capital outlays using rate of return measures common to standard investment criteria. Given the essential role of advanced telecommunications in maintaining the economic integrity of key segments of the state, it is incumbent upon policymakers to facilitate the provision of this emerging infrastructure on a competitive basis to all citizens.

The rationale for supporting such universal access lies in the basic concept of public goods, and it is compatible with and no less important than earlier efforts to ensure the widespread availability of electric and basic telephone service. The solution will require local support, private initiatives, market-based incentives, and public resources. Recent federal legislation has made some funds available for this purpose, although State matching dollars are required. Several years ago, Texas created a Telecommunications Infrastructure Fund (TIF) which could potentially be used for this purpose.

One promising source of funds for this effort, recently identified by the PUCT, lies in the excess earnings of incumbent local exchange carriers (ILECs) stemming primarily from access charges for intrastate toll (in-state long-distance) calls. The Perryman Group recently completed studies examining those charges as they relate to rural, border, and urban segments of Texas. Because of the potential importance of this issue to future economic development in Texas, some of the results of that analysis are included at present.





Access charges are fees charged by ILECs to the interexchange carriers (IXCs) providing long-distance service to end-users. These charges represent compensation for use of the various aspects of local telephone networks including loops, switches, and transport mechanisms. They take the form of both fixed monthly charges per subscriber line and per minute charges for using the system. These fees are levied by both the originating and the terminating carrier (that is, the location where the call is placed and where it is received).

Evolution of Telecommunications in Texas

Until the mid-1980s, telephone service in the US and Texas was essentially provided by regulated monopolies. In fact, a single company controlled about 75% of all local lines and 90% of long-distance service. As was the case in many other sectors emerging during and after the American Industrial Revolution (such as railroads, trucking, electricity, and natural gas), companies were granted monopolies in specific service territories, with their pricing, rates of return, and other parameters subject to public regulation. The rationale behind this approach was rooted in the efficiency of avoiding duplication of expensive infrastructure and the objective of assuring and accelerating universal accessibility.

A common feature of regulated monopolies is that, while overall profits are held to levels approximating likely competitive outcomes, the pricing and costs for individual services are not efficiently matched. In fact, deliberate subsidies of some activities by others are often introduced to achieve specific policy objectives. With regard to telephone service, one such variation from market-based resource allocations was the use of high (relative to costs) rates for long-distance calls to offset much of the cost of providing local service. This approach was adopted to facilitate low rates for basic service, thus promoting universal access. In effect, long-distance users, who were primarily corporations and wealthy individuals during the early years of telephone access, subsidized the spread of local telephone networks. Because these revenues were generally received by the same company irrespective of their source, such subsidies were largely a matter of intracompany transfers and relatively easy to administer. In such developmental periods, such practices, while inefficient, may well be justified on other grounds. There is little doubt that universal access to key infrastructure has been beneficial to aggregate economic performance.





By the early 1980s, major users of long distance were beginning to bypass the public networks, and competitive firms were aggressively seeking access to the long-distance market. The deregulation of telephone service began in earnest in 1984 with landmark court decisions and sweeping changes in policy by the Federal Communications Commission (FCC). This effort was in keeping with a trend toward opening other sectors to competition as well. By this point, universal access had been achieved, and the possibilities for efficiency gains from competition were becoming widely recognized. Of particular relevance was the replacement of intracompany transfers with direct payments by long-distance carriers to local exchanges for the use of their networks.

The per-minute segment of these charges for interstate calls has been steadily reduced over time, falling from a national average of more than \$0.17 in 1984 to around \$0.01 today. This ongoing pattern reflects recognition that (1) most costs of the network do not vary with minutes of use, and (2) pricing incremental access substantially above incremental costs inhibits demand for long-distance service, thereby creating needless inefficiency and limiting overall economic integration and growth.

Access Charge Reform

Although some access charge reform has also occurred for intrastate rates in Texas in recent years, the pace has been much slower than for interstate rates at the federal level. The access charges within the state currently average over \$0.055, with some areas having rates in excess of \$0.15 per minute. The cost of providing intrastate access is approximately the same as interstate access, with the result that Texans in general pay several times more than the economically efficient rates for in-state long-distance service. Customers in Texas underconsume intrastate long distance in that they are not allowed to equate marginal benefits to actual marginal costs, thus placing artificial limits on efficient resource allocation, economic integration, and business expansion. Moreover, recent analysis by the PUCT reveals that the ILECs consistently have significant excess earnings each year, thus indicating that access charge reforms could occur without corresponding increases in monthly per line charges.





As an alternative of particular relevance to future infrastructure needs, some portion of these funds could be converted to a monthly charge (which does not create distorted market efficiency) and used to support broadband development in areas of the state where it is difficult to achieve based solely on anticipated private investment returns. Through such a program, overall rates could be reduced, resource allocation could be enhanced, and current excess revenues could be leveraged to advance long-range prosperity for rural Texas, the border, and other areas with critical needs.

In conducting this analysis, complex modeling and mathematical programming techniques were used to estimate the level of excess access charges on a county-by-county basis, their allocation across relevant sectors, and the resulting impacts of reduced local activity. A large-scale national model was employed to determine overall benefits accruing from greater broadband deployment. These results were then localized using the Texas Econometric Model to gauge local gains.

Magnitude of Excess Intrastate Access Charges

Under the assumption that intrastate access rates were appropriately set at \$0.01 per minute (a rate comparable to or above that in many competing states and which, based on interstate rates around the country, appears to be near incremental costs), the total excess intrastate access costs in the entire state of Texas is \$574.5 million. These charges are approximately 5.5 times those observed with an efficient pricing mechanism; they represent a substantial detriment to locating firms for which telecommunications is a significant cost factor. Of this amount, 24.6% or \$141.5 million represents funds paid by rural Texans and \$116.5 million by border residents over and above those justified by the incremental cost of using an essential network facility.

The analysis reveals that the rural segment of Texas bears a disproportionate share of these charges. This disparity stems from several sources. First, because of the relative remoteness and lack of immediate availability of certain goods and services, residents and businesses in these areas use more in-state long-distance than those in urban regions. On average, rural customers purchase 14.2% more minutes of intrastate long-distance services than those in more populous





areas. For the 50 smallest counties, this total rises to 15.6%. For some counties, this pattern is even more striking. In five counties, for example, the typical telephone customer uses over twice as many minutes as the average in large urban centers. Rural customers use about 125 more minutes of intrastate long-distance per year than those in major metropolitan areas. Similar patterns are observed along the border, although at a somewhat lower magnitude (about 72 additional minutes per year).

A second source of inequity stems from the magnitude of the access charges themselves. While the average access rate across all rural and border areas is approximately the same as that in urban regions, the dispersion across various counties yields substantial disparity. The smallest 50 counties in the state have average intrastate access charges which are 10.2% above the state average. Whereas no urban county has an average rate of more than \$0.06 per minute, 65 rural counties and 15 of 42 border counties are above this threshold. Four counties have average rates over \$0.10 per minute, with Motley County having an average access charge of \$0.156. This level is 2.8 times the overall intrastate average and 15 times the average interstate long-distance charge.

The third area in which rural and border customers are penalized relates to the lower per capita incomes which generally characterize rural areas. When this pattern is combined with higher in-state usage and, in many instances, higher access charges, the result is a notable gap in relative payments for intrastate long-distance service. As a percentage of total income, customers in rural counties pay 51.1% and those in border counties pay 47.4% more than those in urban areas. The gap for those in the 50 least populous counties is 84.6%, and for those in rural counties along the border is 88.8%. In Motley County, this disparity rises to 12.8 times the typical level in urban areas. This analysis, thus, clearly reveals that the effects of excessive intrastate access charges impose substantially heavier burdens on consumers and businesses in rural Texas and along the Texas-Mexico border than those in more urbanized areas.

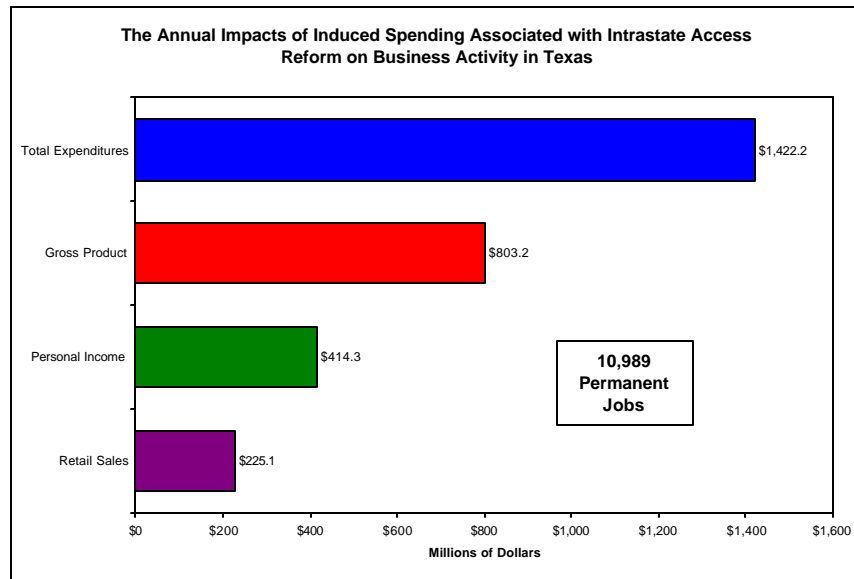




Impact of Eliminating Excess Charges

If the \$574.5 million in excess charges were made available to the citizens and businesses of Texas, the overall economic benefit to the state would be

- ✓ \$1,422.2 million in annual Total Expenditures;
- ✓ \$803.2 million in annual Gross State Product;
- ✓ \$414.3 million in annual Personal Income;
- ✓ \$225.1 million in annual Retail Sales; and
- ✓ 10,989 Permanent Jobs.

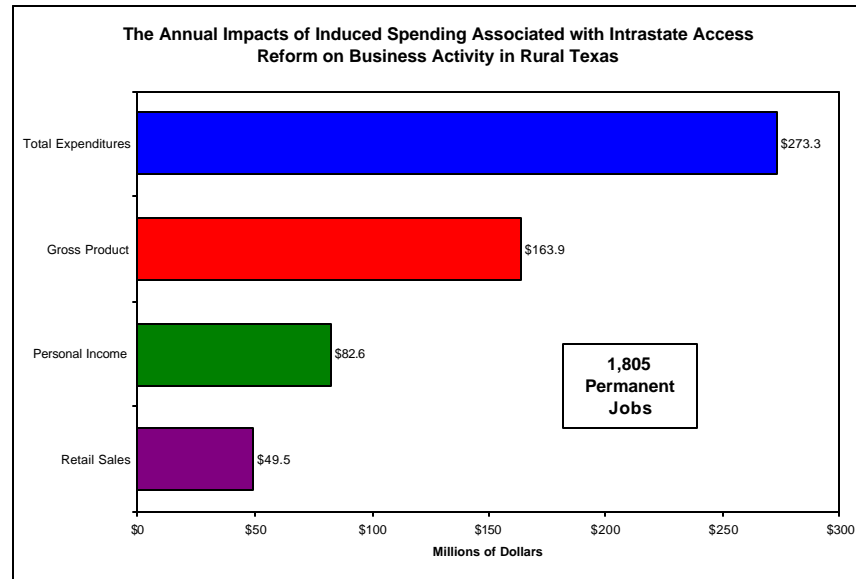
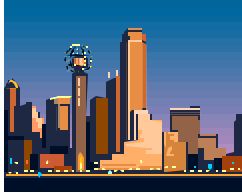


These gains are over and above the enhancements to competition made possible by this type of “fundamental” economic initiative.

The stimulus that would accrue to the rural segments of Texas is estimated to be

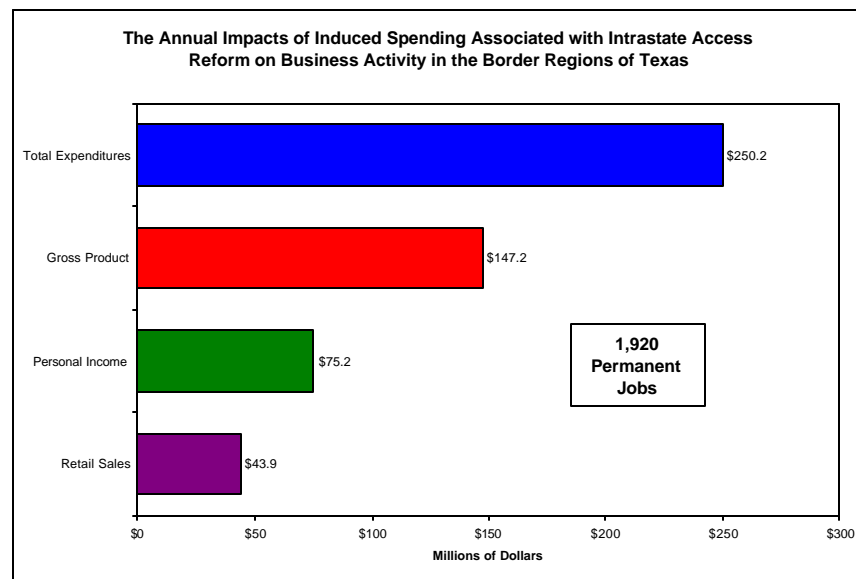
- ✓ \$273.3 million in annual Total Expenditures;
- ✓ \$163.9 million in annual Gross State Product;
- ✓ \$82.6 million in annual Personal Income;
- ✓ \$49.5 million in annual Retail Sales; and
- ✓ 1,805 Permanent Jobs.





Although the direct excess payments are greater for rural Texas than the border region, the overall job impacts are larger along the border due to higher multiplier effects in the urban counties and the lower wages in several areas. The aggregate increase in this 42-county area would be

- ✓ \$250.2 million in annual Total Expenditures;
- ✓ \$147.2 million in annual Gross State Product;
- ✓ \$75.2 million in annual Personal Income;
- ✓ \$43.9 million in annual Retail Sales; and
- ✓ 1,920 Permanent Jobs.





Note that it is not appropriate to simply aggregate the rural and border results to determine the composite potential benefits to those disadvantaged segments of the state. Because of some overlap in geographic areas (border counties which are also rural), there is about 7.3% of redundancy in the calculations.

The analysis demonstrates that (1) rural and border Texans suffer a disproportionate burden from the continuation of excessive access charges on intrastate long-distance calling, and (2) removal of the large differential would bring a marked stimulus to economic expansion in these areas. As noted earlier, however, the most significant element of future development potential in disadvantaged regions lies in the availability of affordable broadband capabilities and advanced telecommunications technologies. If some or all of the funds now being collected as per-minute charges were converted to a monthly fee per line (thus creating economic efficiency in the allocation of long-distance consumption) and used to provide enhanced capacity in rural Texas and along the border, the gains could far exceed those attainable from increased consumer spending.

As previously discussed, **the availability of broadband access permits more effective delivery of educational opportunities at all levels, sophisticated healthcare, and a wide variety of consumer goods and industrial inputs**, in addition to many other items that could improve the potential for people to live and work in regions where such opportunities have historically not been available. Advanced telecommunications technologies also make it possible for many types of firms to locate in non-urban centers to an extent not possible absent such innovations. Similarly, access to these resources can increase the productivity and competitiveness of existing industries located in and around smaller communities and low-income areas. There is perhaps nothing more critical to the viability of the rural and border segments in Texas than bridging the digital divide.

Impact of Accelerated Broadband Deployment

To illustrate this phenomenon, TPG used national simulations of the effects of accelerated deployment under two alternative scenarios as a basis for projecting the effects on rural Texas and the Texas-Mexico border corridor. In both cases, this approach is likely to substantially understate the gains, as the





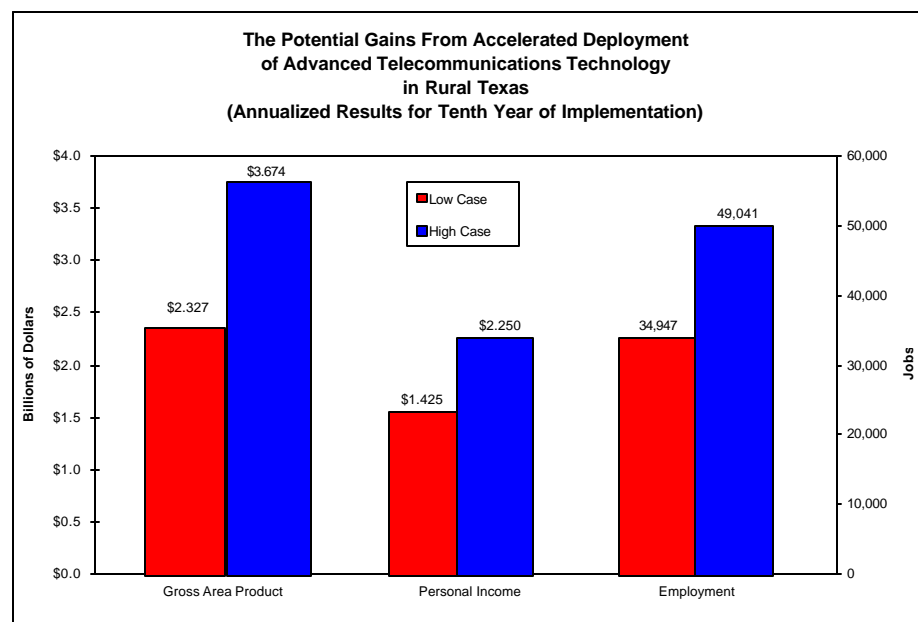
present penetration of broadband access is lower in non-urban areas and those characterized by low per capita income relative to the nation as a whole. As a result of this reduced level of availability, the marginal benefits per dollar invested are likely to be higher.

Based on a ten-year simulation under **the slower pace of implementation, the gains to the non-urban portion of Texas relative to a modest deployment scenario** are

- ✓ \$2.327 billion in annual Gross Area Product;
- ✓ \$1.425 billion in annual Personal Income; and
- ✓ 34,947 Permanent Jobs.

In the **more rapid deployment case**, this stimulus rises to

- ✓ \$3.674 billion in annual Gross Area Product;
- ✓ \$2.250 billion in annual Personal Income; and
- ✓ 49,041 Permanent Jobs.



The **lower case benefits from the border region** total

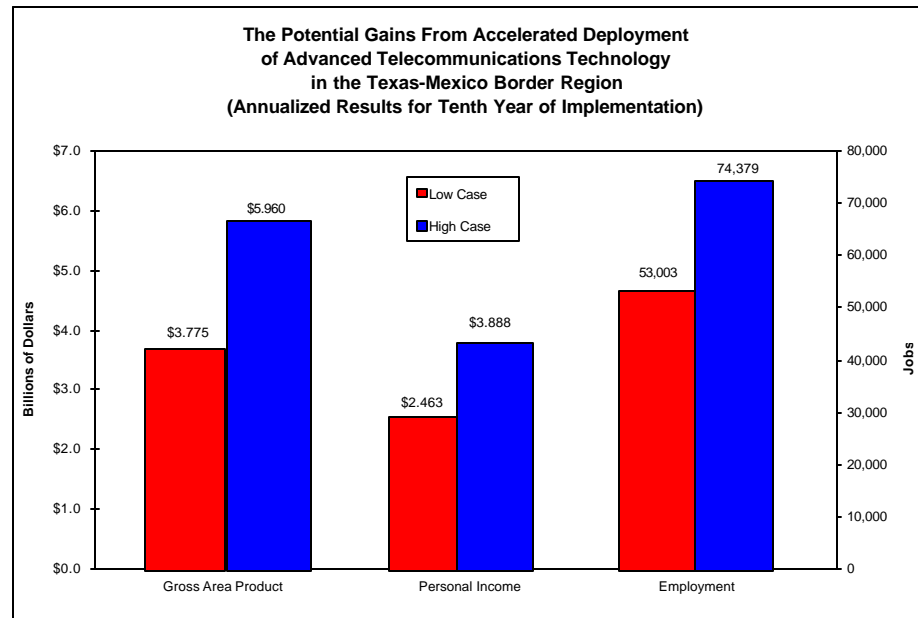
- ✓ \$3.775 billion in annual Gross Area Product;
- ✓ \$2.463 billion in annual Personal Income; and
- ✓ 53,003 Permanent Jobs.

The increases associated with **more extensive broadband penetration in the border region** include





- ✓ \$5.960 billion in annual Gross Area Product;
- ✓ \$3.888 billion in annual Personal Income; and
- ✓ 74,379 Permanent Jobs.



It is, thus, readily apparent that rural Texas and the border would enjoy substantial benefits from greater access to advanced telecommunications technology. (Once again, these results are not appropriately cumulated due to a modest overlap in geographic coverage.)

As a final comparative note, it is useful to observe that the **potential gains from broadband availability far exceed those obtained from the induced consumption generated by access charge rebates.** In particular, the “low case” deployment gains in rural areas are 14.2 times as high for output and 19.4 times as high for jobs relative to the induced consumer and business spending incurring in response to the potential rebates. The corresponding ratios for the border are 25.6 and 27.6, respectively. The differentials with regard to the “high case” are even more substantial. Hence, to the extent that access charge reform can provide the financial capacity to expand or accelerate advanced telecommunications technology deployment, it represents a highly effective mechanism for promoting sustained rural and border economic expansion.





Summary of Benefits of Access Charge Reduction

The analysis thus reveals that excessive per minute access charges for intrastate long-distance service (which distort market incentives and result in inefficient resource allocation) impose a substantial and inequitable cost on residential and business customers in the rural and border parts of Texas. The reduction of these charges to the levels dictated by economic efficiency would increase overall spending in communities across the state, thereby improving prosperity and job creation. Even greater benefits, however, could be achieved through redirecting some portion of these funds into a program to facilitate access to broadband and other advanced communications technologies. The availability of these resources could literally redefine the economic prosperity and quality of life in critical parts of the state, while simultaneously providing for more efficient resource allocations.

In summary, reducing intrastate access charges and using the resulting funds to support broadband deployment will (1) increase economic efficiency for the entire Texas economy, (2) eliminate a mechanism that systematically penalizes all Texas telephone customers with disproportionate harms to those in non-urban and other disadvantaged regions, and (3) facilitate the single most important factor encouraging long-range progress and survivability in vital segments of the state. Whatever funding mechanism is ultimately used, efforts to stimulate modern telecommunications services at reasonable prices to all parts of Texas are an essential policy objective.

3. Electric Power

Another element of the infrastructure essential to economic development is adequate supplies of affordable electric power. This factor is particularly important in Texas in that, other things equal, the cost of electricity will be higher for residential and business customers than in other areas simply because of temperature extremes (especially in the summer). The recent crisis and ongoing difficulties in California and temporary shortages in other parts of the country have graphically illustrated the necessity of maintaining effective, reliable, and affordable electricity access. This challenge has become intensified in recent years, as many states and other countries have begun to open power markets to competition. As with telecommunications and other traditionally regulated





sectors, this trend reflects the facts that (1) universal access has been accomplished and (2) there has been widespread recognition of the benefits of competition with regard to cost savings, efficiency, and innovation.

During the 1999 Texas Legislative Session, Senate Bill 7 (SB7), known as the Texas Electric Choice Act, was passed. This measure mandated competition in the retail market for electric power beginning in January 2002. Specifically, the generation and marketing of electricity to former customers of investor-owned utilities (IOUs) has been opened to market forces (with some limited exceptions in some areas), while transmission and distribution (T&D) remains regulated. Municipally-owned utilities and rural electric cooperatives have the option to adopt competition in their territories. The final bill was the result of extensive research, analysis, and discussion with careful focus on meeting the specific needs and circumstances confronting Texas. Senate Bill 7 received bipartisan support and was endorsed by utilities, major power users, environmentalists, economic development groups, regulators, and independent power producers.

This bill, passed as the 76th Legislative Session drew to a close, made Texas the 21st state to open its electricity market to the forces of competition. Moreover, SB7 was crafted in a manner designed to optimize both the magnitude and distribution of benefits. As a fundamental economic development initiative, the deregulation of power offers profound potential benefits. Specifically, it is likely to lead to (1) lower costs for capital-intensive industries (as well as others), (2) construction of new facilities, and (3) greater incentives for innovation and cost efficiency. SB7 provides Texas a business climate more conducive to new and expanded industrial facilities. As noted earlier, the benefits of deregulating markets have been clearly illustrated in recent years through cost savings, innovations, and related benefits found in airline transportation, trucking, railroads, telecommunications, and natural gas transmission.

The Texas statute was designed to ensure incentives for market entry, address issues of stranded costs for existing plants built by incumbent utilities under the regulated regime, mandate significant emissions reductions, and encourage the development of alternative (wind) power. It was also established within an environment characterized by excess supplies of electricity and an internal power grid, the Electric





Reliability Council of Texas (ERCOT), which covers the vast majority of the state. Although there were naturally some transitional difficulties encountered in deregulating a system that had been in operation for many decades, and it is (and was) recognized that additional transmission capabilities are needed, Texas is ideally suited to achieve success in implementing electric competition.

After the passage of SB7 in 1999 but before its major provisions became effective, the California power market meltdown caused substantial concern throughout the country. Despite initial success in other states (such as Pennsylvania) and several other nations (including Great Britain), the magnitude and duration of the crisis on the West Coast shaped perceptions regarding electric competition.

The actual causes of disruption in California are numerous and will not be pursued at length in this discussion. They include, among others, (1) a substantial shortage of power within the state which required open market purchases; (2) a power grid that was not conducive to high volume transfers; (3) a process that made it extremely difficult to add new capacity; (4) a mechanism that did not permit significant hedging of power supplies and prices in futures markets; (5) a transition to retail competition that was not tied to the development of new market entry; and (6) a freeze on retail prices (prior to competition) while wholesale prices could increase dramatically. In short, adverse market conditions, a poorly-conceived legal framework, and an improper overall structural framework virtually doomed this initiative to failure. This situation is, however, in no way indicative of the prospects for an electric competition program properly developed and implemented.

As the date of establishing competition in Texas approached, the headlines regarding the collapse of Enron began to dominate business news, and political maneuvering and renewed discussion of open electric markets ensued. Enron had been extensively involved in trading power in wholesale markets and is alleged to have manipulated prices in California (although any such improprieties, represent only a portion of the problems plaguing that market). The fallout from the Enron bankruptcy and subsequent debacle has temporarily impacted trading volumes (which help to make markets more efficient and stable) and has impacted many other firms, including both new market entrants and





incumbent utilities in Texas. Other electric providers have been adversely affected by dislocations in overseas markets, the reaction of equity prices to Enron and similar corporate scandals, and the overall sluggishness in the economy. As a result of these various factors, some power plant construction in Texas has been deferred (although the state continues to enjoy surplus power supplies) and some competitors have exited the market. Incumbent utilities have also been faced with fuel price increases, causing them to seek rate increases under the regulated transition mechanism (SB7 mandated a 6% reduction in residential and small commercial rates during the initial period of emerging competition, but allowed upward adjustments resulting from fuel price gains).

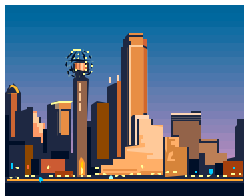
Despite these rough spots, the Texas Electric Choice Act is fundamentally sound and is already achieving notable gains from all categories of Texas consumers. Prior to the implementation of the measure, TPG performed estimates of the potential stimulus that could be expected from an effective transition to electric competition.

Although it is impossible to precisely quantify the benefits to Texas prior to a few years of actual experience, reasonable indications can be ascertained. For example, the US Department of Energy has estimated that a typical family of four in a representative deregulation program can expect direct annual savings on electricity of about \$114 and an additional \$128 in lower costs for other products and services. While this assessment is far from definitive, it suggests that positive economic consequences are likely as the competitive framework moves forward. This conclusion is further supported by experience in other industries.

Impact of Electric Deregulation

In an effort to provide a more specific analysis of potential benefits, TPG has used its various modeling systems to examine the anticipated outcomes of the interactions of supply and demand factors with regard to changes in power costs. The first step in this process involved the estimation of the direct effects of lower electricity prices on residential, commercial, and industrial users. In making this determination, TPG (1) analyzed available studies of the likely effects of deregulation, (2) reviewed information regarding patterns of market response in other deregulated industries, (3) examined the underlying production linkages between





electricity and various components of the economy, and (4) conducted extensive additional research to explore the various relationships among regulation, prices, purchasing patterns, and other factors as they related to the specific provisions of Senate Bill 7.

An important aspect of the computation process was a determination of the degree of price elasticity of demand for electricity consumers and industrial users. TPG quantified this elasticity based on multiple regression analysis relating historical consumption and price patterns with appropriate control for economic conditions, conservation, and related factors. Separate estimates were computed for residential, commercial, and industrial usage. In addition, the results were reinforced by findings from empirical studies in the academic literature.

TPG's analysis and results were designed to quantify the economic effects of deregulation once the transition period specified in SB7 was completed and the resulting structure had stabilized. To accomplish this task, an assessment was offered for 2003 (expressed in constant dollars to adjust for inflation), thus allowing for two years of competitive responses.

Deregulation Response Scenarios

Based on these efforts, TPG developed the following scenarios describing the likely economic consequences of deregulating the electric utility industry:

1. Low Response Case—Commercial and Industrial Users: Competition was assumed to bring a 6% reduction in price for small commercial customers, the minimum level mandated by SB7. Larger users were assumed to achieve somewhat comparable savings through negotiations with various providers, as has occurred in Pennsylvania and elsewhere. The lower end of the calculated range of elasticities was used, reflecting lower assumed responsiveness in raising output as electricity prices fall and usage rises.
2. Low Response Case—Residential Consumers: This scenario utilized the lower bound for electricity price reductions (the mandated 6%) and the upper end of the elasticity range calculated for residential customers. Use of the higher elasticity estimate is conservative in





that it results in a relatively larger increase in electricity usage by consumers as electricity prices fall. Therefore, less new spending by consumers is generated for goods and services (other than electricity), and total economic effects are smaller.

3. High Response Case—Commercial and Industrial Users: In the High Response case, the upper bound of TPG's calculated range of likely price effects, or 13%, was used. The upper bound of the estimated range of elasticity was assumed, meaning that as electricity prices fall, relatively more pronounced raises in production can be anticipated.
4. High Response Case—Residential Consumers: In this scenario, the upper bound of the range of price effects (13%) and the lower bound for elasticity were used. Thus, a greater price decrease was combined with a lower expected increase in electricity spending (and a consequently higher volume of spending for other goods and services).

It should be noted that these price responses are consistent with the short-term response estimated by the Energy Information Administration (EIA) of the US Department of Energy in a baseline structure characterized by no offsetting rate increases for stranded investment. This range offers a conservative estimate of overall positive effects in that (1) higher responses are likely over the long run (as more production factors are variable and subject to substitution), and (2) EIA finds much larger price decreases (22%) in an intensely competitive environment of the type likely to emerge in a large market with a comprehensive program, such as that of Texas as the retail market evolves.

Impact of Reduced Cost of Electricity

The price reductions fostered by competition will translate into savings on electricity usage for consumers. As consumers spend less of their household budgets on electricity, they will spend more on local purchases of food, clothing, housing, and other items. Increased local purchases translate into higher sales by local food stores, retail shops, apartment complexes, doctors, and myriad other establishments and service providers. As sales expand, these establishments have a need for (and are in a position to hire) additional employees.





Thus, a decrease in the cost of electricity frees up dollars to be spent for other types of local goods and services. With this increase in spending, additional employment positions are created. These direct job gains at local outlets, in turn, generate multiple rounds of indirect and induced activity and, thus, the need for still more workers.

Similarly, the total savings in electricity expenditures for commercial and industrial customers can be estimated using spending information derived from the direct requirements matrix of the Texas Multi-Regional Impact Assessment System. The resulting direct increase in output can then be calculated using the market responses (elasticities) previously quantified. This process permits reasonable estimates of the initial stimulus to production across more than 500 industrial categories. Once these direct gains are computed, the total effects on the Texas economy can be ascertained from simulations of the impact system.

Under the minimum response (6% reduction) scenario, the impact of SB7 across all residential, commercial, and industrial users was projected (by 2003) to be approximately

- ✓ \$600 million in annual Total Expenditures;
- ✓ \$300 million in annual Gross State Product;
- ✓ \$200 million in annual Personal Income;
- ✓ \$160 million in annual Retail Sales; and
- ✓ 7,700 Permanent Jobs.

If the more aggressive levels of savings are achieved under competition (13% reduction), then the estimated aggregate benefits (by 2003) increase to

- ✓ \$2.7 billion in annual Total Expenditures;
- ✓ \$1.4 billion in annual Gross State Product;
- ✓ \$0.9 billion in annual Personal Income;
- ✓ \$0.6 billion in annual Retail Sales; and
- ✓ 31,000 Permanent Jobs.

Clearly, the potential direct stimulus of Senate Bill 7 to the Texas economy is notable.

Early Results of Deregulation

In a more recent effort, TPG assessed the gains by major customer category after four months of actual implementation





(through April 2002). At that point, approximately 10% of the eligible load had already been converted, with those taking advantage of the ability to shop for a retail electricity provider ranging from the state's largest industrial power users to governmental entities to tens of thousands of individual residential customers. In the residential category, the total effect of competition during the January-April period was estimated to be

- ✓ \$288.0 million in annual Total Expenditures;
- ✓ \$135.8 million in annual Gross Area Product;
- ✓ \$81.1 million in annual Personal Income;
- ✓ \$69.2 million in annual Retail Sales; and
- ✓ 2,075 Permanent Jobs.

For the commercial category, the benefits of competition to date were approximately

- ✓ \$179.6 million in annual Total Expenditures;
- ✓ \$92.5 million in annual Gross Area Product;
- ✓ \$52.4 million in annual Personal Income;
- ✓ \$38.7 million in annual Retail Sales; and
- ✓ 1,287 Permanent Jobs.

In the industrial category, the aggregate gains from competition over the four-month period were

- ✓ \$64.6 million in annual Total Expenditures;
- ✓ \$25.0 million in annual Gross Area Product;
- ✓ \$14.3 million in annual Personal Income;
- ✓ \$5.5 million in annual Retail Sales; and
- ✓ 179 Permanent Jobs.

Public sector benefits from competition to date included

- ✓ \$184.1 million in annual Total Expenditures;
- ✓ \$97.1 million in annual Gross Area Product;
- ✓ \$65.3 million in annual Personal Income;
- ✓ \$24.8 million in annual Retail Sales; and
- ✓ 1,742 Permanent Jobs.

Thus, the overall benefits to the economy from consumer savings among all major customer categories are estimated at

- ✓ \$716.3 million in annual Total Expenditures;
- ✓ \$350.4 million in annual Gross Area Product;





- ✓ \$213.1 million in annual Personal Income;
- ✓ \$138.2 million in annual Retail Sales; and
- ✓ 5,283 Permanent Jobs.

These economic effects will continue to increase markedly over time, as has been verified by subsequent conversion reports issued by the PUCT.

It is interesting to note that after only four months, the benefits of retail electric competition were already approaching the levels in the “low case” simulation of potential outcomes. Thus, it appears that added benefits will far exceed the levels predicted on an *a priori* basis.

In addition to these gains, the power plant development induced by SB7 is also providing a substantial stimulus to the state economy. More than 30 power plants involving over 23,000 MW of capacity have gone forward due, in large part, to the competitive environment for electric generation. During the four-month period from January through April alone, the ongoing construction led to overall economic gains of \$2.9 billion in total spending.

The aggregate effects of power plant development activity associated with competition since Senate Bill 7 was enacted were found to be (through April 2002)

- ✓ \$32.4 billion in annual Total Expenditures;
- ✓ \$16.1 billion in annual Gross Area Product;
- ✓ \$10.7 billion in annual Personal Income;
- ✓ \$4.1 billion in annual Retail Sales; and
- ✓ 285,359 Person-Years of Employment.

Construction benefits will accrue to the state economy on an ongoing basis in response to growing demand, despite some initial project delays and cancellations.

Renewable Energy Resources

Developing the state’s renewable energy resources is an important aspect of providing for future power needs.

Wind energy is one of the key means of generating energy using renewable resources. The legislation providing for deregulation of the electric utility market included a provision that 3% of the state’s energy needs must be met through renewable sources by 2009. While that figure is still a low





percentage, it tripled the proportion of energy from renewable sources at the time the bill was signed. The system is well ahead of schedule in reaching that goal, as impressive wind farms are visible all across the West Texas landscape, with several others in the planning and implementation stages. In fact, in the pre-deregulation environment, only a handful of projects contributed about 187 MW of power. Since the passage of SB7, the number of wind projects has more than doubled, and capacity has jumped to more than 913 MW. Among other benefits of “green” power, the facilities stimulate business activity in several rural segments of the state.

Delayed Capacity Additions

Although there has been some media coverage recently of decisions by power plant developers to put capacity additions on hold, it is important to note that these delays are in no way a negative aspect of competition. Because power plants must now make economic sense in a market environment, supply and demand conditions determine whether and when such plants are profitable. The recent economic slowdown decreased the profit outlook for power plants; not surprisingly, some projects were put on hold. However, as the economy begins to show definitive signs of improvement, it may be anticipated that many of these projects will move forward. As noted, the market and its signals are the most reliable means of both ensuring that there is sufficient power to meet future needs and that scarce economic resources are not diverted to ill-timed investments.

Economic Development Efforts of Utilities

In addition to the measurable outcomes described above, competition in retail electric power will also have a positive impact on economic development within the state. This gain comes from at least two sources. First, the rules governing the implementation of SB7 are designed to preserve the traditional function of electricity providers in assisting with corporate relocations. Historically, public utility companies significantly contributed to the economic development of the state of Texas. The reason is simple. As a provider of power in a regulated market, a utility company benefited when major new customers entered its market. Consequently, Texas-based utility companies had substantial incentives to lure businesses to locate within their service territories, particularly major manufacturing facilities that had extensive power





requirements. The three largest utility companies in the state, TXU, Reliant HL&P, and Central & South West Corporation (now part of a larger organization), have maintained large, active economic development programs that have benefited Texas. In addition, other utilities across the state have been instrumental in attracting corporate locations to their areas.

Although the public utility efforts certainly have not been the sole reason for corporate locations to Texas, they have played a key role in attracting hundreds of new facilities and expansions. Their aggressive recruiting and sophisticated personnel and resources often have been instrumental in identifying, attracting, and securing locations. The site selection work of utilities has been especially valuable to smaller communities lacking adequate resources to maintain comprehensive programs. In fact, many of these areas tend to regard the local utility as the economic development arm of their business enhancement efforts. Continuing activities of this nature are a critical element of ongoing initiatives to promote rural economic prosperity in Texas.

In a competitive environment, much of the impetus for retail electric providers to secure new corporate facilities is removed. In particular, power-intensive manufacturing plants and other large operations are no longer the exclusive customers of the local regulated utility; they are free to seek the most advantageous opportunity and to switch providers at any time.

In the deregulated environment, economic development programs are part of the transmission and distribution (T&D) or “wires” companies. These entities are the natural allies of local areas in recruiting new industrial locations, as (1) their facilities are geographically proximate to the communities they serve, whereas generators may be quite distant, (2) significant new plants will often require new T&D infrastructure, and (3) the wires companies will benefit from power users irrespective of their electricity providers.

In order to illustrate the importance of these initiatives, TPG examined the effects of the development programs on business activity in a typical year. To the maximum extent possible, allocations across sectors were made based upon actual experience and power usage. The findings indicate benefits totaling





- ✓ \$20.6 billion in annual Total Expenditures;
- ✓ \$9.4 billion in annual Gross State Product;
- ✓ \$5.0 billion in annual Personal Income;
- ✓ \$2.0 billion in annual Retail Sales; and
- ✓ 145,000 Permanent Jobs.

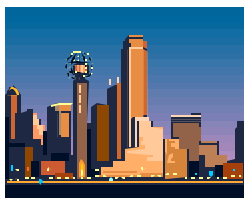
These totals represent over 38% of all net new activity in Texas during an average recent year. The direct effects alone are about 10% of total job creation. Again, it would be inappropriate to attribute all of these gains to utility recruitment efforts, but their catalytic contribution is quite significant. While future activities may be more modest in some instances, their contribution is nonetheless important and represents a notable advantage of the evolving competitive framework in the state.

Economic Development Impact of Deregulation

The other principal economic development contribution of the Texas Electric Choice Act lies with the competitive process itself. As previously noted, a successful program will enhance the business climate of Texas and, thus, the prospects for attracting major new economic activity. The prospect of greater choice and the ability to negotiate for electric service rates and characteristics will both improve the competitiveness of the state and simultaneously reduce the costs of doing business. This opportunity is highly desired by large power users. A comprehensive program such as that implemented by SB7 will allow Texas to remain competitive with large industrial states, such as Ohio and Pennsylvania, that are moving forward with similar programs; Texas will also gain an advantage over those lagging in their efforts.

In summary, Texas stands to reap enormous gains from the advent of a competitive market for power generation. Lower prices, greater choice, more flexibility, innovation, efficiency, economic competitiveness, adequate electricity to accommodate sustained growth, and enhanced environmental quality are among the benefits afforded by an open market for power. The state has taken bold, well-planned steps to effectively transition into a competitive retail electric market. Despite some initial frustrations, corporate scandals involving energy trading, and a modest economic slowdown, the program is clearly experiencing notable achievement in multiple areas. It is imperative that Texas maintain the





competitive status recently established and continue to promote the emergence of this vital infrastructure initiative.

E. Healthcare, Insurance, Risk Management, and Judicial Reform

A final broad category of fundamental factors in the Texas business climate involves the costs associated with various forms of risk for both individuals and companies. Both medical and property and casualty insurance premiums and outlays are high-profile issues with notable effects on the actual and perceived quality of life within the state. A closely related issue is the overall fairness of the judicial system. In particular, the tort structure represents one of the principal areas in which State government can significantly affect the risk profile in an effective manner. These aspects of the Texas economy are briefly explored in this section.

Healthcare

An effective and accessible healthcare system is a vital component of any community. Healthcare, which is essential to well-being, should remain a major priority of both state and national government. Texas currently ranks second to last in the percentage of people insured. As of 1999, 23.3% of the adult population in Texas did not have health insurance. The situation for children is particularly acute. Providing access to affordable healthcare is challenging policymakers throughout the country; in Texas, due to a large population and unique demographics, the problem is especially difficult. In total personal expenditures on healthcare, Texas ranks third behind only New York and California. On a per capita basis, however, Texas ranks 37th among all states with \$3,401 per Texan in healthcare expenditures. The state was 18th in 2000 at \$1,274 per day for adjusted hospital expense per inpatient day.

Healthcare Access in Rural Areas

Healthcare access is an especially difficult problem for those in the rural segments of the state. Only 8.1% of Texas physicians practice in rural areas, even though such areas account for nearly one sixth of the population. Recent statistics indicate one physician per every 1,310 people living outside the state's metro areas; the overall state ratio is 699





to 1. Assuming the two population groups seek medical assistance at the same rate, it is apparent that rural doctors have almost twice the patient load. Given that the rural population is older and, thus, more likely to require medical assistance, the situation is likely to become even worse. In fact, mortality is also higher in non-urban counties.

Fifty-four percent of the 196 rural counties in Texas are currently classified as primary medical care Health Professional Shortage Areas (HPSAs) by the US Department of Health and Human Services; 17.2% of Texas' 58 metro counties bear this designation. Some 56,000 people live in 23 rural counties in which there is not a single primary care physician; another 19 rural counties, representing 86,100 people, have only one. Two major factors have contributed to this situation:

1. Due to low population densities and relatively modest incomes, physicians often do not see rural areas as financially rewarding, especially since those who live there have about a 20% higher uninsurance rate than the overall population—even with the large number of Medicare-covered residents. Compounding the problem is the growing level of discounts assessed by Medicare, Medicaid, and private insurers, which has had a disproportionate effect on rural suppliers. Not only has this made rural practice less profitable, but it has also reduced the level of margins available to subsidize the care of the uninsured.
2. Although the number of people entering the medical profession has increased substantially over the last several years, the trend toward specialization, which requires relatively dense population pools, has proven unfavorable to rural areas. (This trend may be slowly reversing as about 40% of recently graduating medical students were planning to enter general practice as compared to only about 15% in the early 1990s.)

Demographic realities, combined with evolving healthcare delivery methods geared to larger population concentrations, point to major challenges in the future. As noted earlier, one primary mechanism is the potential to deliver some aspects of medical care to remote regions through the application of broadband technology.





Insurance

Finding affordable healthcare has always been a struggle for individuals and families without the financial means to pay insurance premiums. Medicare and Medicaid provide some relief to the poor and elderly, but often do not cover the costs associated with extended hospital stays or expensive prescriptions. Medical inflation is consistently well over twice the overall rate of price increases in the economy. These rising costs in recent years have also led many businesses, particularly smaller ones, to reduce or eliminate healthcare benefits. Employer premiums in Texas have increased by more than 25% in 2002 alone (compared with 15% nationally), and 18% of small businesses in the state have dropped coverage in the past five years. Almost half of the workers in Texas are not covered by health insurance, and three-fourths of uninsured Texas families are headed by a full-time worker (the highest percentage of any state in the country).

There are several reasons for the rising insurance rates. One significant factor is the increase in the actual cost of healthcare itself, much of which is due to advances in technology and the availability of new, but expensive, treatment options. Advances in pharmaceuticals and direct consumer advertising have escalated prescription drug fees markedly. An increasing number of mandated coverages puts still further pressure on costs. While many of these programs are implemented with the best of intentions, their cumulative effects can be counterproductive. With a total of 67 required treatments in any policy issued in Texas, the state has one of the most regulated and least flexible systems in the country. As a result, spending per enrollee is higher in Texas than in most of the populous states that are competitive for new and expanded business locations. In addition, since professional liability claims are partly determined by the cost of medical care, rising costs in healthcare typically elevate insurance premiums, which in turn necessitate still further price hikes.

The medical liability insurance market in Texas is also characterized by increasing professional liability premiums stemming in part from judicial trends. These premiums provide coverage for patients who have been legitimately injured as a result of a negligent act, but also fund coverage to capable and competent doctors and facilities subject to nonmeritorious lawsuits. Higher insurance premiums for doctors are a hidden cost that consumers





ultimately pay; they also threaten the ability of practitioners to continue their activities. The need to practice defensive medicine similarly increases health-related outlays. In some specialties, malpractice premiums are 30%-40% higher in Texas than in other large states with more balanced judicial systems.

Another factor behind increasing insurance premiums is the underwriting cycle. When market conditions are favorable, many companies offer a variety of policies, which in turn creates competition in the marketplace and typically lowers premiums. Eventually, claims mount as companies take on more and more risk. Companies that priced their products too low often become unprofitable and leave the market. The companies that remain tend to raise their premiums to offset losses or choose not to take on coverage with adverse risk/ratio properties. This trend is somewhat exaggerated at present due to the rationalization of the industry pricing following the managed care transition.

Property and Casualty Insurance Environment

Because the state level policy issues are quite similar, it is also appropriate to comment at this point on the property and casualty insurance environment. **Texas has seen substantial rate increases of late and has some of the highest premiums in the US.** Major companies have left the state, and there is legitimate (though somewhat overstated) concern regarding the ability to acquire coverage in the future. Such issues can materially affect the ability of Texas to support future business expansion, real estate development, and, thus, economic growth.

As with healthcare, there are many contributing factors in this dilemma. Parts of Texas have particular vulnerability to tornadoes, floods, and hurricanes, thus escalating casualty risk. The state has also suffered from a general national trend of increasing premiums occurring in the wake of the September 11, 2001 attacks. These events fundamentally altered the calculus of insurance coverage and exacerbated normal swings in the industry underwriting cycle. Texas has also witnessed a rising tide of exorbitant claims regarding mold contamination in buildings. These forces, combined with a relatively litigious environment, a cumbersome regulatory environment, and generally rising construction costs, have precipitated a substantial challenge for state policy.





Many aspects of these risk and cost management issues are beyond the immediate control of governmental agencies and legislative bodies. There are, however, some areas to make a notable positive impact (and others to avoid). Mandates on specific coverages can directly escalate costs by changing risk parameters. As with healthcare, Texas has an established pattern of imposing well-intentioned, but cumbersome and expensive, coverage requirements. Correspondingly, allowing more flexible options in both health and property insurance can allow consumers and businesses the ability to negotiate and structure affordable options based on these specific circumstances. Rate caps, while popular in rhetoric, rarely work in practice. In fact, if companies are leaving the state or reducing coverage due to lack of profitability, artificial limits on pricing will only make the situation worse. There is a long history (several centuries, in fact) of price controls being unsuccessful in many contexts, whereas market-based approaches to insurance reforms have shown promise in other states. Fraud detection and enforcement can also be enhanced.

Perhaps the most fruitful avenue to achieve meaningful cost control lies in judicial reforms. Both healthcare and property and casualty costs are materially affected by litigation risks. The state enacted notable measures in 1995, as well as a workers' compensation plan several years earlier that transformed an essentially bankrupt system into a viable mechanism to compensate for legitimate losses in a fair and responsible manner. (Given current costs in Texas relative to other states, comparable reforms in unemployment insurance might also merit consideration.) TPG prepared an independent analysis of the effects of the prior tort reforms (as of 2000) on business activity in the state. Given the importance of this issue to the overall competitiveness of Texas, some key aspects of these findings are summarized at present.

Effect of Judicial Reform

Obviously, the civil justice system is an important institutional framework designed to provide a fair and equitable forum for the resolution of disputes among parties. When properly functioning, it both provides a mechanism to appropriately compensate those who have legitimately been harmed and an effective deterrent to undesirable actions. Such a structure can be highly beneficial to a society in terms of promoting





equal and impartial justice as well as establishing part of the critical context in which economic activity can prosper.

On the other hand, a justice system that is inadequately balanced can be counterproductive in many ways. If the litigation process, for example, tends to produce exorbitant levels or numbers of damages or awards, it can generate significant dislocations. These include, among others:

- ✓ increased costs and risks of doing business;
- ✓ disincentives for innovations which promote consumer welfare;
- ✓ enhanced incentives to file lawsuits of questionable merit;
- ✓ higher insurance premiums than would exist under a more balanced approach;
- ✓ deterrence of economic development and job creation initiatives; and,
- ✓ diversions of activity to unproductive ends.

In short, an overly aggressive tort environment misallocates society's scarce economic and human resources, thus decreasing the overall welfare of citizens.

Until recently, Texas had a judicial system that was widely believed to be severely imbalanced. It was the subject of newspaper and magazine articles, television news segments, and extensive public discussion. High-profile cases with record jury awards contributed to the state's reputation as a "happy hunting ground" for plaintiffs. The unpredictability and risk associated with this situation added to the cost of living and doing business in Texas. The civil justice system was frequently cited as a significant barrier to industrial expansion, site selections, and other investments in the state. One prominent publication called it a "Wild West embarrassment." The perceived problems in the judiciary led to widespread efforts to achieve meaningful reform.

There is a substantial body of empirical evidence to support that these concerns were well placed. The cost of the US justice system has escalated historically at a much faster rate than the growth of the overall economy. Using data compiled by independent sources, it is estimated that the cost of tort litigation in the United States from 1980 to 1995 increased by 366% on a current-dollar basis, while gross domestic product measured comparably only rose by 267%. Over the same





period of time, an analogous measure of tort litigation costs in Texas rose by 451%. By virtually any measure of litigation intensity, the Texas judiciary was expanding 20% to 25% more rapidly than the nation as a whole.

If the judicial system were an efficient mechanism to compensate legitimately injured parties, then its rapid growth might well be viewed as positive and beneficial to society. Unfortunately, such has not been the case. The efficiency of US tort activity has been measured at only 25%, that is, only \$0.25 of every \$1 of cost actually goes to compensate injured parties. A comparable estimate for Texas indicates that efficiencies during the relevant period were even less (in the 21%-22% range). Thus, the system is significantly inefficient, and its rapid growth represents a drain on the economy and overall consumer well-being.

In recent years, the civil justice system in Texas has undergone substantial evolution. There were positive changes in the state's workers' compensation system in the early 1990s, followed by a comprehensive package of judicial reforms in 1995. The measures included (1) limits on punitive damages, (2) increased sanctions for frivolous suits, (3) more equitable standards for joint and several liability, (4) limits on "venue shopping" and out-of-state filings, and (5) modifications with respect to deceptive trade practices and medical malpractice claims. Since enacting reforms, the rate of growth in the cost of the system has fallen, both in absolute terms and relative to the nation as a whole. In fact, even after adjustment for the higher inflation of the 1980s, the rate of increase in costs since the reforms were enacted has reached only about half of the 1980-1995 level.

The results of the analysis by TPG to quantify these gains reveal that the total cost of the tort system in Texas in 2000 was \$15.482 billion. In the absence of the recent changes, the costs would have been \$25.889 billion. The total direct savings were, thus, \$10.407 billion. Of this amount, approximately 26.7%, or \$2.777 billion, may be attributed to improvements at the national level. **The savings resulting from reforms and related factors in Texas are estimated to be \$7.630 billion.** Although it is not possible to precisely allocate this savings across programs, it appears that the vast majority of this amount is attributable to the 1995 reforms, with the remainder reflecting subsequent legislation, changes in

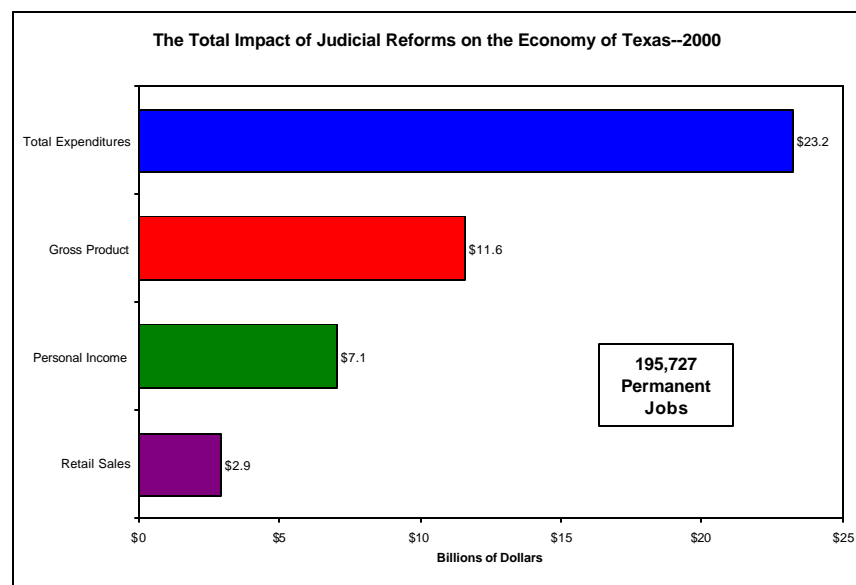




the composition of the judiciary, and the residual effects from the earlier workers' compensation legislation.

The overall impact of tort reform on the Texas economy, including all direct, indirect, and induced effects, is estimated for 2000 to include:

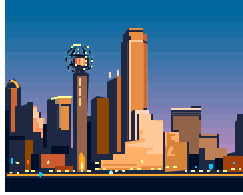
- ✓ \$23.207 billion in annual Total Expenditures;
- ✓ \$11.601 billion in annual Gross State Product;
- ✓ \$7.056 billion in annual Personal Income;
- ✓ \$2.901 billion in annual Retail Sales; and
- ✓ 195,727 Permanent Jobs (over a five-year period).



The benefits represent about 5.64% of aggregate income growth, 5.32% of overall output expansion, and 11.4% of net job creation over the 1995-2000 period. The employment growth is consistent with comparable measures in the cross-sectional study by the National Bureau of Economic Research. Approximately 30.4% of this increase accrues directly to consumers, with much of the remainder flowing indirectly to consumers through lower prices and enhanced innovation and choice.

This analysis and similar ones conducted by TPG for other regions clearly demonstrate that judicial reforms can impact the costs of risk management in significant ways. Despite the impressive progress cited above, the costs of the tort system are continuing to escalate in real (inflation-adjusted) terms, although at lower rates than before. Moreover, Texas





continues to be ranked among the bottom five states in the country with regard to the perception of the fairness of its civil justice mechanism. Thus, it appears that reforms specially tailored to reducing healthcare costs (such as significant malpractice reforms) and property and casualty risks (such as limits on mold claims and other specific types of liability) offer fruitful approaches to a more effective and competitive business climate with respect to risk management.

In summary, healthcare access and affordability, insurance costs of all types, and the tort process are critical, fundamental factors that profoundly impact the business climate and framework of Texas. Prompt and effective attention to these matters can pay handsome dividends to future growth and prosperity. Approaches should be based on increased flexibility in designing plans, rational and balanced limitations on liability, reduced mandates, and market-oriented outcomes.

F. Synopsis

This segment of the study has examined several critical categories of issues which affect the economic development prospects for Texas. These areas compose much of the “fundamental” element of the state’s competitiveness. While many of them are not always thought of or treated properly as economic development matters, they profoundly affect the capacity of the state to attract, retain, and expand firms, facilities, and opportunities. They represent core elements of Texas’ success in the intensely competitive global marketplace. They also consume a substantial portion of the time, energy, and fiscal resources of the State, far more than the amounts for items traditionally characterized as economic development.

Excellent educational opportunities at all levels; quality environmental conditions with adequate quantity and quality of water and clean air; a tax system that provides adequate revenue to meet legitimate needs in a fair and equitable manner; infrastructure to accommodate the requirements of increasing population, employment, and production; and adequate and affordable healthcare, reasonable costs of and access to other risk management needs, and a balanced judicial system for equitably resolving legitimate disputes are all essential to defining Texas as a vibrant and desirable place to live, work, and do business. Although they are important





for many other reasons and in many other contexts, they are nonetheless prerequisites for achieving enduring prosperity. While this set of factors does not purport to be totally comprehensive, it represents key components fundamental to making the “short list” for new activity.

The challenge of moving from the “short list” to ultimate success normally involves incremental incentives and programs specifically designed to promote site selections, expansions, and retentions. Virtually every state in the US and country in the world maintain specific initiatives designed to promote long-term business growth. The process is dynamic, complex, innovative, sophisticated, and competitive. Inducements are a necessity in this quest. This critical aspect of the future of Texas is presently explored.

V. “Incremental” Economic Development Initiatives

A. Background, Strengths, and Weaknesses

As noted in Section II, Texas does not fare well relative to other states with respect to “the last mile” in economic development. As the benchmark comparisons with other large competing states illustrate, Texas lags other large states in direct incentives, employer-driven job training, marketing, and other key areas essential to attracting business locations. One major study concluded essentially that Texas is not on the radar screen when it comes to industrial site selection incentives. The state has a reputation for not being able to meet the marketplace in terms of programs that impact decision-making; similarly, the state’s marketing efforts are not sufficient to inform prospective firms and site selection specialists of the favorable aspects of the economic climate within the state. On a more positive note, Texas is generally viewed as a desirable place to live and work, often ranking at or near the top of performance surveys. Nonetheless, the state has seen a marked deterioration in recent years in new locations and related measures in absolute, relative, and per capita terms.

This pattern is occurring within an overall economic environment that is rapidly changing in ways that have significant implications for long-range prosperity. First, while many traditional industries remain important, particularly in some regions, the US is clearly finding its comparative





advantage in high-tech, high value-added sectors characterized by a notable amount of intellectual capital. It is unlikely that low-wage manufacturing is going to remain viable domestically, irrespective of any incentives, due to the competitive realities of a global marketplace. Texas, to be effective, must be focused on both current and future technologies. This approach requires outstanding educational performance, specific and targeted job training initiatives for skilled technical workers, efforts to ensure access to early-stage financing, and other technology transfer mechanisms.

Second, much of the market for the future output of this country lies in other parts of the world. It is thus an indispensable element of national policy that the potential for free trade be expanded. At the state level, efforts to promote exports must be a part of an overall strategy for growth. Texas has achieved impressive gains in international activity in recent years. Spurred by outstanding seaports and major airports, a lengthy border with Mexico as the benefits of the North American Free Trade Agreement have surfaced, and an excellent mix of goods and services in demand throughout the world, the state almost tripled its exports in the 1990s. Maintaining and expanding this global presence to other regions (almost half of current trade is with Mexico) is essential to enhanced economic performance.

Texas' Economic Strengths

Within this external framework, Texas brings many characteristics which shape its economic development agenda. The state saw a population increase of about 4 million residents (more than 22%) during the 1990-2000 decade. Both natural expansion (births exceeding deaths) and in-migration contributed to this rise, and the pattern (at a somewhat lower rate) is projected to continue well into the future. The state has the youngest population in average age of the ten most populous states, with birthrates, average family size, and average household size all well above national norms. The demographic patterns in Texas reflect in large measure the rapidly growing relative importance of the Hispanic population, particularly in South Texas and the border region.

The unique patterns in the Texas population have a profound influence on economic performance. On the one hand, a continuation of current trends in education and earnings by





ethnic groups leaves the state with daunting challenges and the prospect of declining living standards and per capita incomes. On the other hand, a young and growing labor force can be an enormous asset in attracting new activity, particularly as the aging “baby boom” generation begins to retire and a shortage of skilled and experienced workers persists. The situation can be viewed as “good news” or “bad news”—a challenge or an opportunity—but it definitely shapes the proper direction of policy. Overall, the availability of people to contribute to the economy is clearly positive; equipping them to do so effectively is a necessity.

Other strengths of the Texas economy include its location, climate, heritage, infrastructure, favorable costs in several categories, concentration of production in areas likely to foster growth and diversity, and endowments of key resources and assets. The state is situated in the Sun Belt and in the central part of the country, with access to all parts of the US and key markets in Europe and Asia. The extensive border with Mexico and location along major highway corridors also benefits business conditions in Texas. In fact, Texas has more miles of public roads than any other state. Rail access across the US is also available (more than 12,000 miles of track), with international air service from eight airports and numerous other excellent facilities. Dallas/Fort Worth International Airport is among the busiest in the country, and Fort Worth Alliance Airport is the first such facility to be designed exclusively as a business airport. It has been a source of enormous economic expansion since it opened in late 1989. The state has 13 deep water ports, as well as other seaports and linkage to the Gulf Intercoastal Waterway. The Port of Houston is the nation’s busiest port. Texas has adequate supplies of electric power and sophisticated telecommunications systems in major urban markets.

Texas also has advantages related to some important elements of cost. **Housing and real estate are less expensive than in many competing markets, as are construction costs, transportation costs, power costs, and wage rates.** Although rankings vary across individual categories and states and are different depending on the specific needs of each sector, Texas is generally competitive with regard to basic operating costs.

The Lone Star State is also blessed with significant **resources**. For much of history, this focus was on natural





resources such as rich deposits of oil and gas, fertile agricultural land, and wide-open spaces for livestock. Today, resources include science and engineering programs at major universities, research capacity, major medical facilities, and a large high-tech output and employment base. Texas gained more than 150,000 high-tech jobs in the 1990s and created more total net new employment than any state in the country. The state has more than 500,000 high-tech workers (despite recent layoffs) and boasts such significant facilities as Sematech, the Johnson Space Center, and highly acclaimed public and private research institutions in many emerging fields. Texas enjoys multi-billion dollar annual levels of research and development activity, a major technology incubator, and effective technology transfer mechanisms. All of these factors have contributed notably to the positive economic performance of the state in recent years and bode well for the future.

Texas' Economic Weaknesses

In many instances, the weaknesses in the Texas business complex are closely related to the basic strengths. The state has a large potential workforce, but school achievement is less than ideal. Dropout rates are high, and other performance measures lag competing areas (although the situation appears to be modestly improving). Texas also has a widely-publicized crisis in its school finance mechanism and must cope with ever-expanding enrollments and demographic challenges.

Texas has excellent infrastructure, but lacks sufficient resources to maintain and extend it rapidly enough to meet ongoing needs. The result is reduced mobility, increased congestion, and challenges in maintaining adequate air quality. The tax burden within the state is generally well perceived (particularly the absence of a state personal income tax), but falls disproportionately on capital-intensive firms which are critical to continuing prosperity. Moreover, the state faces significant budgetary constraints in its ongoing efforts to meet the needs of a growing population and enlarged production capacity, and the tax structure is not well suited to bring increased revenues concomitant with spending requirements. While Texas has an exceptional cultural heritage, its public commitment to the arts is well below that of other large states. In fact, the lore and image of the past is a key factor in the desirability of Texas as a tourist site.





As noted earlier, **Texas severely lags most other states in its dedicated programs to attract new industry, secure expansions, and retain current employers.** These incremental economic development initiatives include tax incentives and other monetary inducements as well as targeted job-training mechanisms. Furthermore, despite the widely-recognized success of a tourism promotion campaign over many years, there's no comparable level of effective marketing of Texas as a destination for business activity. The result is that the state has fallen behind in key measures of success in corporate expansion and has lost important opportunities to other states. Many of these losses are occurring within firms and sectors that have been sources of strength for Texas in the past.

The sheer **diversity** that gives the state much of its strength is also a source of substantial challenge. While impressive growth has been observed in recent years in many parts of Texas, much of the rural segment not adjacent to urban centers is experiencing loss of population and a deteriorating economic base. Similarly, the Texas-Mexico border region enjoys remarkable growth by some measures, yet endures living standards well (and increasingly) below state and national averages. Inner cities of large metropolitan areas face notable obstacles as well. Addressing these concerns requires considerable effort over the next several years.

Incremental Initiatives

Given these observations, it becomes readily apparent that Texas must have competitive “incremental” initiatives to accompany the fundamental functions examined at length previously. This comprehensive program must be built around the following broad areas:

- ✓ competitive monetary incentives (tax reductions, site-specific infrastructure support, etc.) sufficient to be effective in head-to-head comparisons with other states and countries;
- ✓ competitive job-training mechanisms designed to reflect the specific needs of employers;
- ✓ marketing programs targeted at key decision-makers in the site selection process;





- ✓ focused industrial recruitment and retention incentives based on the relative strengths of individual regions but with an emphasis on the high-tech, high-growth emerging sectors likely to define US economic growth in the future as well as extensive commitment to research and development, technology transfer, and capital availability;
- ✓ expanded programs to promote the export of goods and services produced in Texas to major foreign markets;
- ✓ continuing and enhanced efforts to promote tourism and cultural pursuits within the state;
- ✓ cognizance of the importance not only of attracting new facilities, but also (1) retaining and expanding existing employers and (2) encouraging startups; and
- ✓ recognition of the diversity of the state and the need to accommodate disparate characteristics, opportunities, and limitations.

Before examining the status of existing programs in Texas, a couple of final points are worthy of note. First, while it is both appropriate and convenient to think of fundamental and incremental initiatives separately, they are not completely independent. In particular, elements of the tax structure (such as heavy reliance on local property taxes to fund public education) create the need for certain types of incentives that might not exist or be warranted in other jurisdictions.

Second, any economic development program must, by its very nature, be dynamic and flexible. Countries, states, and communities are constantly bringing new innovations to the process, and the requirements of corporations are continually evolving. It is, thus, imperative that approaches be periodically reassessed and that a certain degree of discretion be incorporated into the process.

B. [An Evaluation of Existing Economic Development Programs Within the State](#)

There are many programs and agencies which can be construed as having implications for economic development. The most directly involved department is Texas Economic Development, which manages the tourism programs,





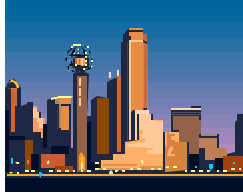
generates leads for local communities, and administers several specific capital access, zone, and grant programs.

Examples of other agencies with at least some role include the Texas Department of Transportation, the Texas Water Development Board (through bonds for new water supply initiatives), the Texas Department of Agriculture, the Texas Commission on the Arts, the Texas Parks & Wildlife Department, the Office of Rural and Community Assistance (ORCA), the Texas Department of Environmental Quality, the Texas Department of Housing and Community Affairs (through bonds for local housing efforts), the Texas Education Agency, the Texas Higher Education Coordinating Board, the Public Utility Commission of Texas, the Texas Public Finance Authority, the Telecommunications Infrastructure Fund, the General Land Office, the Texas Workforce Commission, the Texas Council on Workforce Competitiveness, the Comptroller of Public Accounts, and the Texas Agricultural Extension Service. This list is by no means exhaustive, particularly given that the line between fundamental and incremental activities is far from bright. Key committees of the Texas Legislature are also involved in business expansion and job creation efforts.

In addition to these agencies, many state universities (particularly Texas A&M) and community colleges have efforts aimed at economic development, as do local city and county governments, council of governments regions, regional mobility authorities, port authorities, river authorities, and other public and quasi-public entities. Economic development corporations (EDCs) formed by cities with dedicated sales tax revenue are active on an ongoing basis, and several federal programs are administered within the state. In the private sector, chambers of commerce, utilities, industrial development corporations, electric cooperatives, and trade associations with a vested interest in business development (such as the Texas Association of Business, the Texas Municipal League, the Texas Conference of Urban Counties, the Texas Association of Realtors, the Texas Association of Rural Communities, the Texas Farm Bureau, and the Texas Association of Counties) often play a significant role.

The above litany seeks merely to point out that it would be virtually impossible to even enumerate, much less evaluate, all economic development efforts in any meaningful fashion. Thus, the focus of this segment of the study is on major





programs which are a significant part of the actual and perceived menu of options for Texas in competing for new activity.

1. Economic Development Sales Tax

By far the most lucrative economic development program in Texas at present is the local option Economic Development Sales Tax. It is, in fact, the only pool of resources that keeps Texas remotely competitive with other large industrial states. In essence, under certain limitations regarding community size and overall sales and use tax rate, a community may vote to impose a sales tax upon itself, under Sections 4A or 4B of the Development Corporation Act of 1979 (as amended), with the proceeds specifically designated for economic development purposes (some areas designate all or part of the levy for property tax reductions, which also has positive benefits in attracting capital-intensive companies).

Both 4A and 4B have relatively wide spectrums of categories of eligible uses, with 4B being somewhat broader to accommodate sports facilities and other tourism-related efforts. Both sections of the act accommodate manufacturing, distribution, warehousing, military base readjustments, job training facilities, general business development, targeted infrastructure, educational facilities, and other categories of projects which promote local expansion. Communities may also issue bonds secured by future sales tax revenue to support more extensive projects which are crucial to major development activities. Similarly, the Texas Leverage Fund allows areas with the sales tax in place to use the proceeds as collateral for loans to expedite economic development programs. Areas enacting the 4A or 4B sales tax establish economic development corporations to administer and oversee the program. A similar plan allows the creation of County Development Districts which have the same basic flexibility as a 4B community. These districts, which do not have the same oversight requirements as EDCs, require a petition by landowners, approval by the county, and an election by voters within the district.

More than 400 communities have enacted the Economic Development Sales Tax since its inception in 1989, and it now generates hundreds of millions of dollars annually. It has brought many benefits to Texas. Specific cities point to dozens if not hundreds of new businesses that have been





induced to locate by the incentives made possible by the sales tax program. It has also allowed many areas to establish and maintain ongoing economic development operations staffed by experienced professionals. TPG and others have analyzed the outcomes in communities where the programs have been in effect for several years, and have found rates of return, investment per permanent job, and other measures to be generally positive.

As would be expected in such a diverse, locally-administered program, the Economic Development Sales Tax has not been without its detractors and difficulties. Some cities which fit the size criteria are ineligible to participate due to prior commitments of sales tax proceeds to other purposes (such as hospital districts), and others have opted not to enact the tax. The result is a pattern of “haves” and “have nots” defined by the availability of these revenues to pursue business prospects. Other larger cities have asked for an opportunity to adopt the tax, although many of them are already at the rate ceiling or have other revenue sources available.

There has also been concern, some of it justified, regarding the manner in which the resources have been deployed. Some (though not many) communities have evidently used the funds inappropriately, particularly during the recent economic slowdown when budget shortfalls led to these revenues being deployed to meet objectives and requirements other than economic development. There have been other occasions when the wisdom of individual outlays can be questioned, and at least one city rescinded the program. Training is now mandated and ongoing for economic development corporations administering the tax proceeds, which should minimize future difficulties. In many instances, concerns reflect a simple misunderstanding of the economic development process or a mistaken belief that enacting the tax will automatically and immediately spur business expansion. Still others have found that Texas cities compete against one another with these resources. There is no doubt some truth to this assertion, although there are almost inevitably locations in other states under consideration at some stage of the process. In any case, only one of the affected communities will ultimately deploy the funds in each instance, and any decisions regarding incentive offers within allowable guidelines should be left to local officials.





It may well be that the 4A and 4B programs could benefit from some minor “tweaking.” Clearly specifying common activities that are not permitted could avoid confusion and misallocations in the future. It might also be beneficial to expand the eligible usage in other areas. As examples, competitive marketing or contributions to more general infrastructure (which would potentially allow greater use of State funds and toll collections) could be effective ways to enhance and magnify local development efforts. Expanding the range of eligible communities might also be considered. In any case, realistic analysis of the “numbers” and discussions with a variety of constituencies make it apparent that continuation of this program is absolutely essential to the future competitiveness of Texas.

2. Property Tax Abatements and House Bill 1200 (The Texas Economic Development Act)

Another common incentive at the local level is the abatement of property taxes. This incentive has been around for decades and is quite widely used throughout the country. Typically, the relevant city, county, community college district, and other taxing entities grant a full or partial abatement of property tax obligations for a specified time period. Over the past decade, school districts have generally not been included in the abatements process in Texas. This phenomenon emerges from the fact that abatements granted by school districts do not offset the taxable wealth base used to determine state aid to public education in the district.

This provision was expressly designed to discourage the use of tax incentives at the expense of resources for school finance and to eliminate a situation in which the state indirectly subsidized school districts in a disproportionate manner not tied to explicit public policy objectives. The goal of preserving a larger total funding base for public education is certainly laudable, yet this provision severely hinders the ability of Texas to attract major capital-intensive facilities. Because of the heavy reliance on local property taxes to fund education, it is typical that school levies are by far the largest component of property tax liabilities. Thus, abatements which exclude these amounts within a framework of excessive dependence (and correspondingly high rates) creates a situation in which traditional abatements are relatively less valuable in Texas than in other areas, thus minimizing (though certainly not eliminating) their value as an incentive.





During the 2001 legislative session, the Texas Economic Development Act (House Bill (HB) 1200) was enacted to partially address this imbalance and the associated inability to attract large facilities. In particular, this measure limited the taxable value of a property for a period of eight years if it (1) meets certain size, job creation, and wage rate parameters (which vary depending on the magnitude of the investment and certain characteristics of the school district) and (2) reflects a major expansion in manufacturing, research and development, or renewable energy. It also contains provisions which ensure that the school district is not penalized for granting this valuation ceiling, although in practice that concept is proving difficult to administer in the current structure of the Act. Thus, under the bill, companies continue to pay property taxes to support local schools, but at a rate allowing them to be competitive with facilities in other states. As an example, a typical semiconductor plant with a \$1 billion investment would save enough over time to eliminate cost disadvantages documented by the industry, yet still pay millions of dollars to support local schools—a classic “win-win” situation.

Effects of the Texas Economic Development Act

In an effort to measure the potential long-range benefits of this new incentive program to the state, two scenarios are postulated. In the first case, it is assumed that the incremental ability to attract projects representing substantial investment (as defined in the statute) rise to 50% of the levels observed in the early 1990s (excluding a spurt of petrochemical expansion). This time period was prior to the enactment of major new initiatives by several large states. A more aggressive model assumes 75% of prior success can be achieved. Using appropriate geographic submodels of the Texas Multi-Regional Impact Assessment System, effects are calculated for both the state and several geographic regions.

Basic calculations of the fiscal gains to state and local governments are also provided. These amounts are the result of taxes on the activity stimulated by enhanced investment in major facilities; they serve as an offset to the tax reductions. (In most instances, the facilities would not locate in Texas absent the program. Thus, there are no foregone revenues to offset, and the property taxes which are collected represent net revenue increases as well. In the interest of conservatism, these incremental property taxes are not





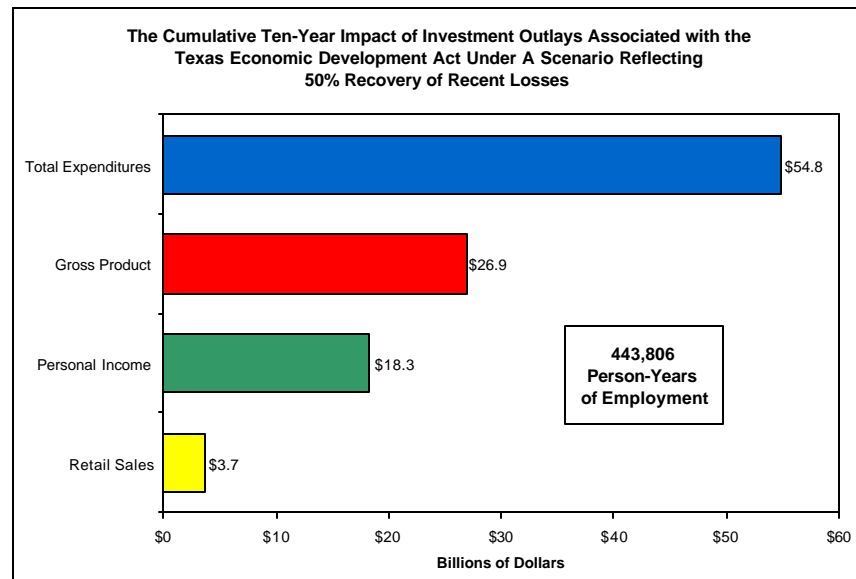
factored into the results reported in the analysis.) These estimates are derived from a dynamic fiscal impact linkage to the Texas Econometric Model and the Texas Multi-Regional Impact Assessment System, which was developed and is maintained by TPG.

The 50% Recovery Scenario

In the most conservative case in which only 50% of recent losses are restored, the cumulative effects of the ongoing investment process are, on a 10-year basis, estimated to be

- ✓ \$54.8 billion in Total Expenditures;
- ✓ \$26.9 billion in Gross State Product;
- ✓ \$18.3 billion in Personal Income;
- ✓ \$3.7 billion in Retail Sales; and
- ✓ 443,806 Person-Years of Employment.

Note that all monetary values throughout this analysis are given in constant dollars, thus eliminating the effects of future inflation.



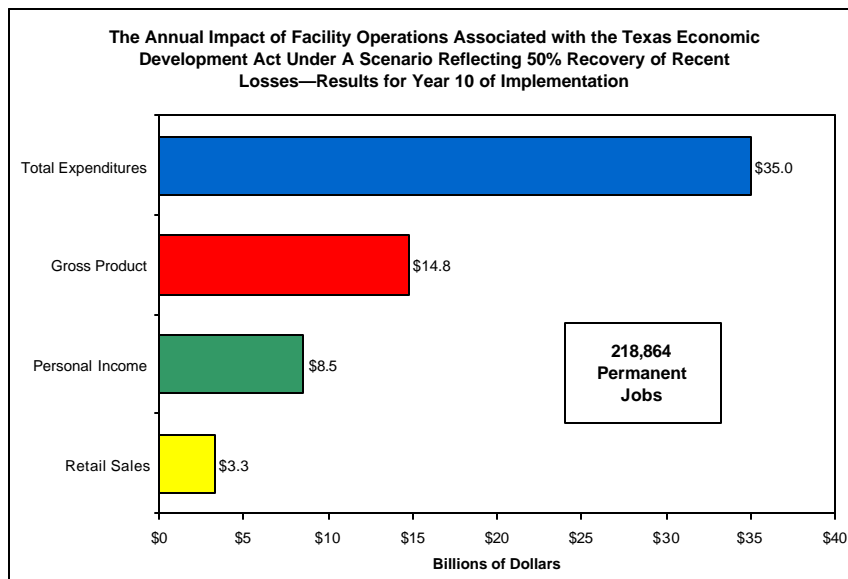
The production activity associated with these new facilities will be a substantial stimulus to the economy. After 10 years, the annual contribution is projected to be

- ✓ \$35.0 billion in annual Total Expenditures;
- ✓ \$14.8 billion in annual Gross State Product;
- ✓ \$8.5 billion in annual Personal Income;





- ✓ \$3.3 billion in annual Retail Sales; and
- ✓ 218,864 Permanent Jobs.



By this point, the gains in investment and production would result in \$821.8 million in State revenue per annum under this scenario. Moreover, the results would continue to expand over time, thus yielding a compounding effect on the Texas economy. The combined results for investment and operations allocated on an annual basis are provided in the table below.

The Annual Impact of Investment and Production Activity Associated with the Texas Economic Development Act Under A Scenario Reflecting 50% Recovery of Recent Losses (Monetary Values in Billions of Constant Dollars)

Year	Total Expenditures	Gross State Product	Personal Income	Retail Sales	Employment	State Revenues
Year 1*	\$4.386	\$2.153	\$1.467	\$0.296	35,505	\$0.076
Year 2*	\$4.386	\$2.153	\$1.467	\$0.296	35,505	\$0.076
Year 3**	\$8.074	\$3.713	\$2.366	\$0.643	58,543	\$0.151
Year 4**	\$11.762	\$5.273	\$3.265	\$0.989	81,581	\$0.225
Year 5**	\$15.450	\$6.833	\$4.164	\$1.336	104,620	\$0.300
Year 6**	\$21.332	\$9.470	\$5.796	\$1.831	145,410	\$0.412
Year 7**	\$25.020	\$11.030	\$6.695	\$2.177	168,449	\$0.487
Year 8**	\$30.552	\$13.370	\$8.044	\$2.697	203,006	\$0.598
Year 9**	\$36.085	\$15.710	\$9.392	\$3.217	237,564	\$0.710
Year 10**	\$41.617	\$18.050	\$10.741	\$3.737	272,121	\$0.822

* Investment Only

** Investment and Production

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group

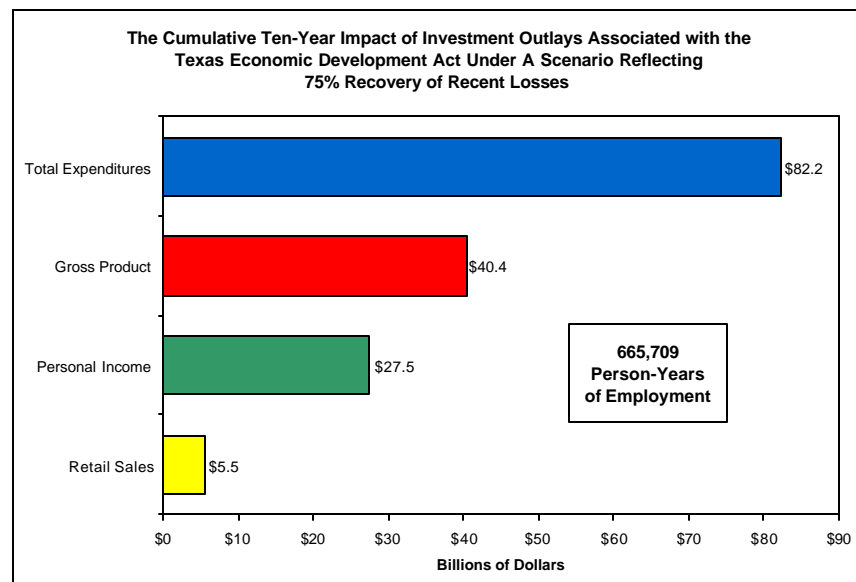




The 75% Recovery Scenario

In the 75% recovery scenario, which is also likely to understate overall benefits once the program is fully established, somewhat larger impacts are observed. With regard to the spending on plant development, the cumulative overall impacts over 10 years are anticipated to be

- ✓ \$82.2 billion in Total Expenditures;
- ✓ \$40.4 billion in Gross State Product;
- ✓ \$27.5 billion in Personal Income;
- ✓ \$5.5 billion in Retail Sales; and
- ✓ 665,709 Person-Years of Employment.

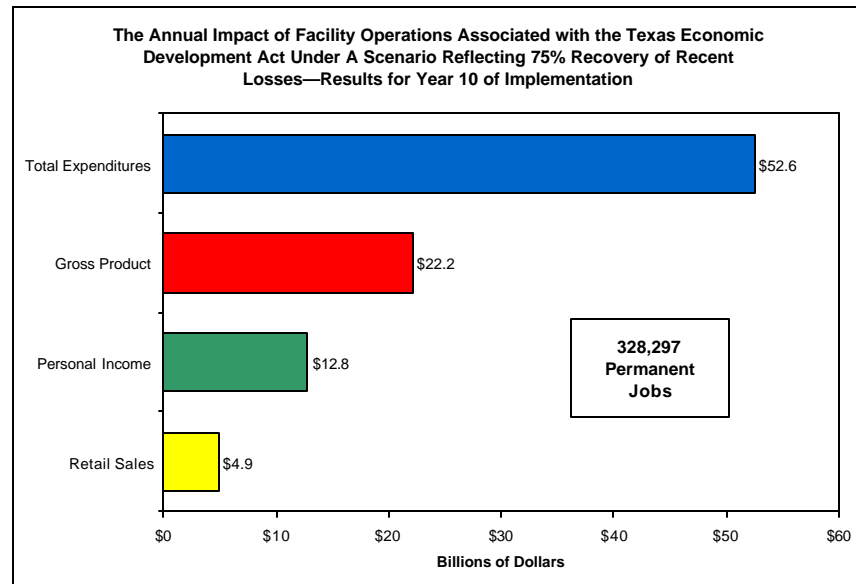


These effects would escalate still further in the future as multiple rounds of expansion in various facilities begin to occur.

The ongoing operations of the facilities locating, expanding, or modernizing in Texas as a consequence of the Texas Economic Development Act under these conditions yield, after 10 years, the following yearly effects:

- ✓ \$52.6 billion in annual Total Expenditures;
- ✓ \$22.2 billion in annual Gross State Product;
- ✓ \$12.8 billion in annual Personal Income;
- ✓ \$4.9 billion in annual Retail Sales; and
- ✓ 328,297 Permanent Jobs.





As in the prior case, a summary of annual composite investment and operations benefits is provided below.

The Annual Impact of Investment and Production Activity Associated with the Texas Economic Development Act Under A Scenario Reflecting 75% Recovery of Recent Losses (Monetary Values in Billions of Constant Dollars)

Year	Total Expenditures	Gross State Product	Personal Income	Retail Sales	Employment	State Revenues
Year 1*	\$6.578	\$3.230	\$2.200	\$0.444	53,257	\$0.114
Year 2*	\$6.578	\$3.230	\$2.200	\$0.444	53,257	\$0.114
Year 3**	\$12.111	\$5.570	\$3.548	\$0.964	87,814	\$0.226
Year 4**	\$17.643	\$7.910	\$4.897	\$1.484	122,372	\$0.338
Year 5**	\$23.176	\$10.250	\$6.246	\$2.004	156,929	\$0.449
Year 6**	\$31.997	\$14.205	\$8.694	\$2.746	218,115	\$0.618
Year 7**	\$37.530	\$16.545	\$10.043	\$3.266	252,673	\$0.730
Year 8**	\$45.828	\$20.055	\$12.065	\$4.046	304,509	\$0.898
Year 9**	\$54.127	\$23.565	\$14.088	\$4.826	356,345	\$1.065
Year 10**	\$62.426	\$27.075	\$16.111	\$5.606	408,182	\$1.233

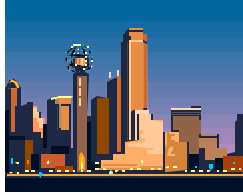
* Investment Only

** Investment and Production

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group

The findings obtained under these conditions clearly illustrate the substantial benefits to Texas from implementation of the Texas Economic Development Act. Moreover, the state would receive an additional \$1.233 billion per annum (by the 10th year) in fiscal revenues from the healthier rate of expansion. Based on currently projected patterns from the Texas Econometric Model, this level of success would increase the overall annual rate of output expansion in the state from 4.3% to 4.5% over the next 10 years. Employment





growth would increase from 2.0% to 2.3%. Thus, it is readily apparent that **the elimination of a substantial imbalance in the competitiveness of the Texas tax structure will, even under conditions of modest success, be a major catalyst to future development.**

Regional Distribution of the Impact of the Texas Economic Development Act

The Texas Economic Development Act is designed to encourage new activity in all parts of the state. As noted previously, TPG has estimated the effects on various regions of the state under both the 50% and 75% scenarios. As expected, expansion is concentrated in the most populous segments of Texas. Nonetheless, notable gains are expected across all areas. Of particular importance is the fact that **the Act offers an advantage to school districts in the state with relatively low current property valuation levels.** This provision of HB1200 encourages new and expanded facilities across the entire state, particularly in lower income, rural, and border areas.

Projected Regional Distribution of New Economic Activity Associated with the Texas Economic Development Act Under A Scenario Reflecting 50% Recovery of Recent Losses—Investment and Production of Year 10
(Monetary Values in Billions of Constant Dollars)

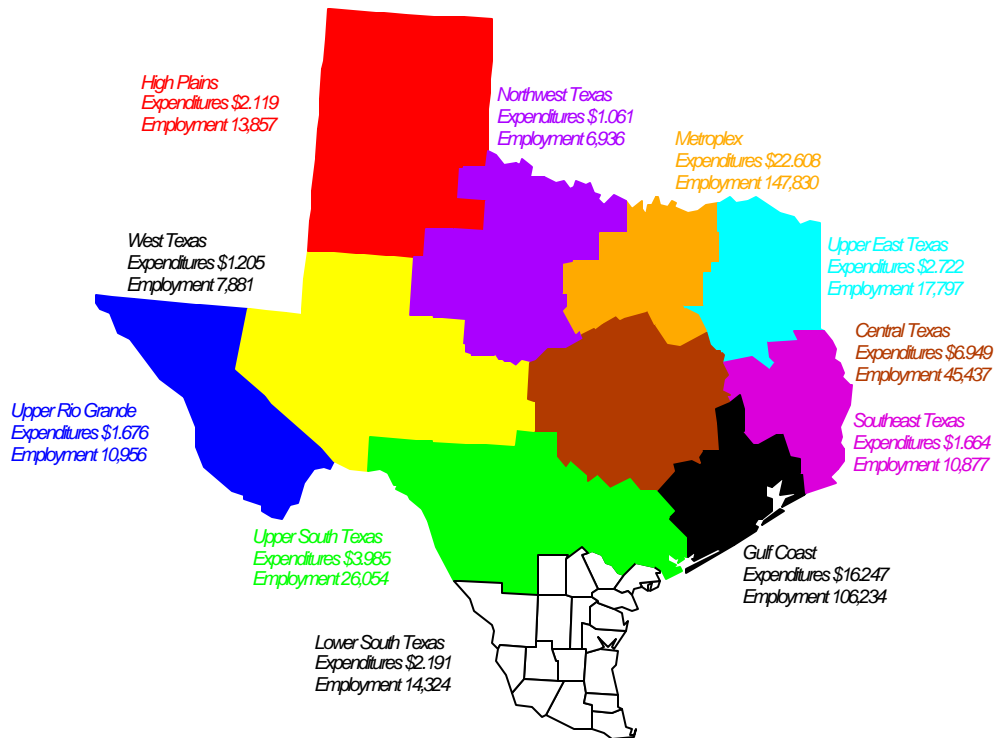
Region	Total Expenditures	Gross State Product	Personal Income	Retail Sales	Employment
High Plains	\$2.119	\$0.919	\$0.547	\$0.190	13,857
Northwest TX	\$1.061	\$0.460	\$0.274	\$0.095	6,936
Metroplex	\$22.608	\$9.805	\$5.835	\$2.030	147,830
East Texas	\$2.722	\$1.180	\$0.702	\$0.244	17,797
Southeast TX	\$1.664	\$0.721	\$0.429	\$0.149	10,877
Gulf Coast	\$16.247	\$7.046	\$4.193	\$1.459	106,234
Central Texas	\$6.949	\$3.014	\$1.793	\$0.624	45,437
Lower South TX	\$2.191	\$0.950	\$0.565	\$0.197	14,324
Upper South TX	\$3.985	\$1.728	\$1.028	\$0.358	26,054
West Texas	\$1.205	\$0.523	\$0.311	\$0.108	7,881
Upper Rio Grande	\$1.676	\$0.727	\$0.432	\$0.150	10,956

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group





**Projected Regional Distribution of New Jobs and Expenditures
Associated with the Texas Economic Development Act Under
A Scenario Reflecting 50% Recovery of Recent Losses—
Investment and Production in Year 10
(Monetary Values in Billions of Constant Dollars)**



**Projected Regional Distribution of New Economic Activity Associated
with the Texas Economic Development Act Under A Scenario Reflecting
75% Recovery of Recent Losses—Investment and Production in Year 10
(Monetary Values in Billions of Constant Dollars)**

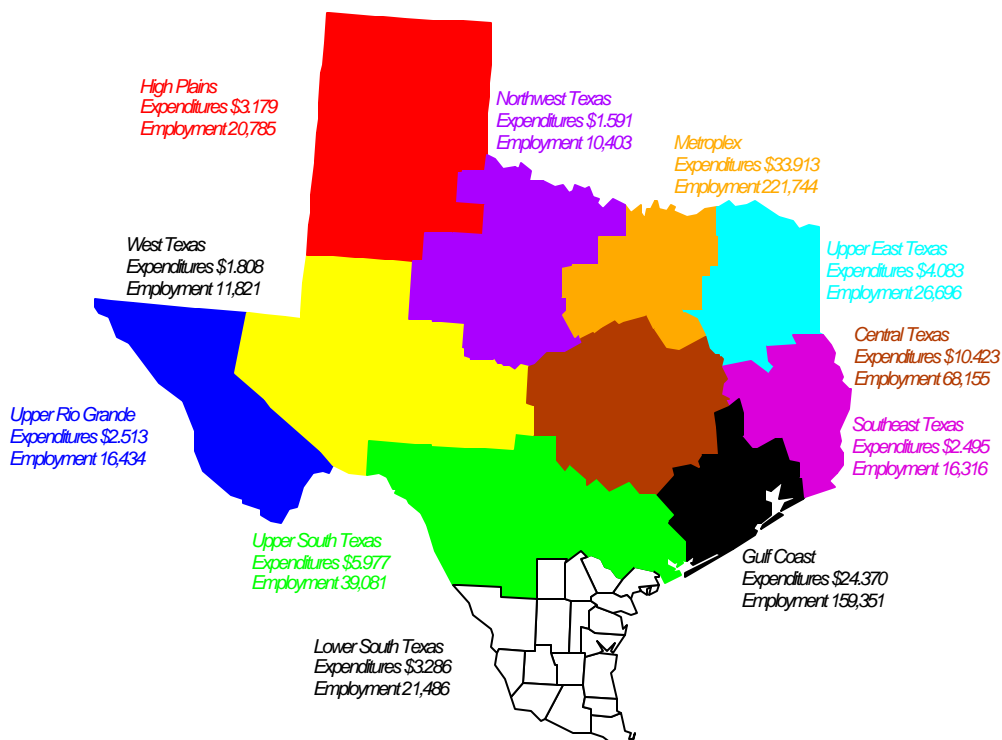
Region	Total Expenditures	Gross State Product	Personal Income	Retail Sales	Employment
High Plains	\$3.179	\$1.379	\$0.820	\$0.285	20,785
Northwest TX	\$1.591	\$0.690	\$0.411	\$0.143	10,403
Metroplex	\$33.913	\$14.708	\$8.752	\$3.046	221,744
East Texas	\$4.083	\$1.771	\$1.054	\$0.367	26,696
Southeast TX	\$2.495	\$1.082	\$0.644	\$0.224	16,316
Gulf Coast	\$24.370	\$10.570	\$6.290	\$2.189	159,351
Central Texas	\$10.423	\$4.521	\$2.690	\$0.936	68,155
Lower South TX	\$3.286	\$1.425	\$0.848	\$0.295	21,486
Upper South TX	\$5.977	\$2.592	\$1.542	\$0.537	39,081
West Texas	\$1.808	\$0.784	\$0.467	\$0.162	11,821
Upper Rio Grande	\$2.513	\$1.090	\$0.649	\$0.226	16,434

Source: Texas Multi-Regional Impact Assessment System, The Perryman Group





**Projected Regional Distribution of New Jobs and Expenditures
Associated with the Texas Economic Development Act Under
A Scenario Reflecting 75% Recovery of Recent Losses—
Investment and Production in Year 10
(Monetary Values in Billions of Constant Dollars)**



To summarize these findings, consistent gains in output and employment on a par with other major industrial states can only occur if Texas establishes and maintains a position among the nation's leaders in attracting large facilities. These plants shape much of the economic landscape and provide opportunities for smaller concerns throughout the state irrespective of their specific locations.

Importance of Major Projects

Examples of this phenomenon abound. At the height of the defense industry buildup in Texas, thousands of small manufacturers and service businesses were supported by the activities of a few major contractors. A single microelectronics facility of typical size will support over a billion dollars in annual spending across the state, create more than 900 indirect and induced manufacturing jobs, and lead to almost 6,000 other service and trade jobs. A single plant of this





nature supports the equivalent of more than 400 typical businesses across the state, including 20 manufacturers.

Major projects are particularly important to rural areas and smaller metropolitan regions. A paper mill in Northeast Texas generates over \$500 million in expenditures and generates more than 2,500 spin-off jobs (over 300 in manufacturing). The activities of this rural firm support the equivalent of 170 typical businesses in the state. Similarly, a large plastics firm in Central Texas generates almost \$1 billion in total outlays in the state, supports almost 5,000 direct and indirect jobs (800 in manufacturing), and provides sufficient overall purchases to support 300 typical Texas firms, including 18 manufacturing plants.

Major projects provide the impetus needed to support many of the more than 400,000 establishments in Texas. They can literally redefine the fortunes of an area, generating the purchases, production, and payrolls which sustain much of the state's growth. They also create the supplier networks which provide opportunities for many smaller concerns in communities throughout the state. The vast majority of businesses in Texas are small; more than 85% have fewer than 20 employees. Many of these firms are dependent on the continuing success of larger enterprises to sustain their specialized products and services. The results of this assessment illustrate this pattern in an unambiguous manner. By enhancing the prospects for Texas to be competitive in attracting major facilities, the Texas Economic Development Act also advances the prospects for this vast network of small businesses and diverse communities to remain viable, healthy, and growing.

Synopsis

This analysis makes it readily apparent that Texas needs a property tax abatement system applicable to school district taxation in order to be competitive. HB1200 is an important accomplishment in this regard and obviously offers the potential to bring notable gains to the state. As the Act is currently being implemented in initial investments, however, several provisions are proving to be cumbersome and are creating uncertainty regarding ultimate savings, risks, and liability. Such impediments can prove to be obstacles to achieving the Act's objectives in that they limit its ability to attract new projects by reducing the state's desirability as a





location. It should be noted that, while this matter is extremely important, its value stems from the underlying tax structure of Texas. The Texas Economic Development Act is in need of some structural modifications to address some of the peculiarities of the education funding and reimbursement system, but is nevertheless a vital part of the competitive mix for Texas.

3. Tax Credits for Research and Development, Job Creation, and Investment

During the 1999 legislative session, it became apparent that Texas was falling behind other large (and some small) states in attracting major facilities and new manufacturing activity. Over the course of the session, a substantial set of incentives was discussed and formulated into proposed Senate Bill 5 (SB5). The measure enjoyed widespread, bipartisan support, but it was ultimately killed late in the process by a technical point of order in the Texas House of Representatives.

Nonetheless, Senate Bill 441 (SB441) included several specific economic development incentives. The bill was originally intended for other purposes (primarily sales tax exemptions), but became the vehicle for a variety of initiatives during the waning hours of the Session following the unexpected demise of SB5. Specifically, it included (1) a statewide tax credit for research and development expenditures, (2) an investment tax credit for capital expenditures in certain Strategic Investment Areas (SIAs), and (3) a franchise tax credit for job creation in the SIAs. Strategic Investment Areas consist of (1) counties with below average per capita income and above average unemployment rates and (2) segments of urban centers which have received certain federal designations for redevelopment.

The incentives incorporated in SB441 were modest in comparison to those proposed during the Session and those offered in certain other states; some of the more promising programs were not enacted at all. Nevertheless, SB441 marked the first time significant resources were dedicated to economic development incentives at the state level in Texas, thus enhancing competitiveness somewhat relative to other areas and establishing an important precedent for future action. Each of SB441's key elements is presently explored.





a. Tax Credit for Research and Development

There are essentially two potential ways to provide tax relief for research and development initiatives in Texas. One is through a tax credit against franchise tax liabilities; the other is through exempting R&D capital purchases from sales taxes. SB441 provided a modest program of franchise tax credits. The economic rationale for government actions to encourage R&D lies basically in the theory of “externalities.” An externality is something that is not captured in the workings of the private economy. Externalities can be good or bad. Pollution, for example, is considered a negative externality, and thus governments take steps to ensure that producers bear the costs of pollution that are not reflected in the market. On the positive side, governments support education because the benefits to society are in excess of the benefits to the individual.

This same notion of externalities applies in the favorable sense to R&D. All of society benefits from innovations in ways that the private market does not capture. For example, advances in technology or healthcare may have benefits to society that are in excess of the actual monetary returns to the discovering entities. Thus, in the absence of government support, the market will produce less R&D than is socially optimal. In keeping with this premise, the federal government has actively supported research initiatives for decades. Many states also now subsidize R&D through incentives. Given the risks and uncertainty associated with such projects, they are extremely cost sensitive.

Research and development does not generate the large and immediate effects of a sizeable investment in a plant that will exist for decades. Instead, R&D has more of a project-by-project impact on business activity. Moreover, R&D “multipliers” are not as large as the ones associated with high value-added manufacturing enterprises. Furthermore, there is no guarantee that R&D in Texas will ultimately lead to production in Texas. The large plants that sometimes emanate from successful research may well be built in other states or, for that matter, other countries.

On the other hand, the R&D jobs themselves tend to be high-paying jobs. Also, the firms engaged in R&D are often those most likely to make large-scale investments in plant and equipment (P&E) and are desirable participants in the state





economy. While an R&D credit does not guarantee the state future plant locations, there is some notable historical correlation between the location of research activity and subsequent production facilities. In fact, numerous research efforts in Texas have led to the presence of major manufacturing complexes. Many of the high-growth industries of the future are technology based and include a significant research component. It is, thus, not surprising that the Governor's Council on Science and Biotechnology Development has placed enormous emphasis on research and development as an essential component for success.

The promotion of R&D is critical in order to be viewed favorably relative to other large industrial states.

Presently, at least 20 other states have adopted similar legislation, including most of the larger areas that typically vie for high-tech locations. In the final form of SB441, companies are eligible to receive a credit of 5% of their incremental R&D expenditures (as that term is defined by corresponding federal programs) up to a maximum of 50% of their franchise tax liability. While this level of credit is less than originally proposed and far less than that offered by some other states, it nonetheless puts Texas into an enhanced strategic position to compete for R&D activity and ultimately additional production facilities.

The Benefits of the R&D Credit

In evaluating the benefits of this credit, the level of direct R&D activity induced by the tax credit is based upon (1) current empirical evidence regarding the responsiveness of companies to research incentives and (2) the final fiscal note for this provision of SB441 prepared by the Comptroller of Public Accounts. The effects are evaluated as of 2004, the fifth year in which the incentive is available. This period is chosen in order to allow sufficient time for firms to adjust their behavior to the R&D credit and for the impacts to achieve a stabilized level.

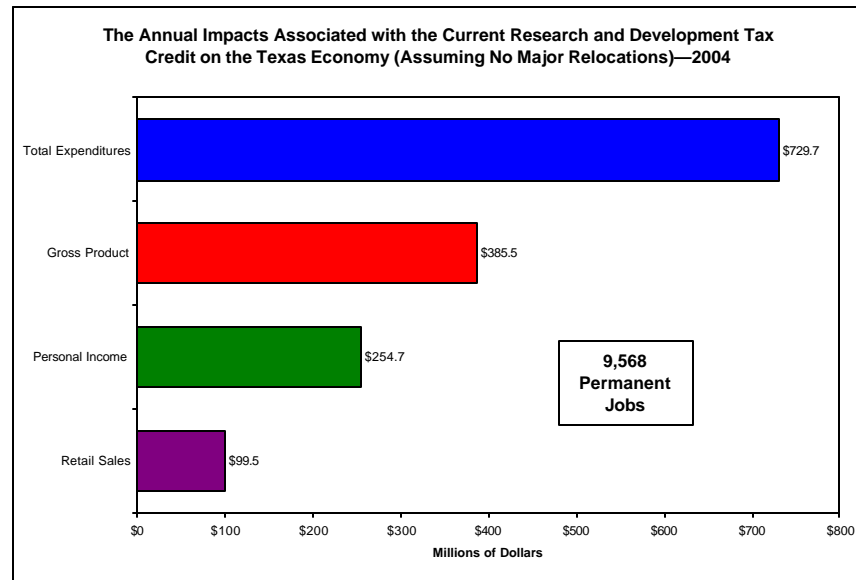
Assuming that the credit **does not** induce any large new plant locations to the state, the overall benefits of the R&D credit are estimated to be

- ✓ \$729.686 million in annual Total Expenditures;
- ✓ \$385.467 million in annual Gross Product;
- ✓ \$254.669 million in annual Personal Income;





- ✓ \$99.495 million in annual Retail Sales; and
- ✓ 9,568 Permanent Jobs.

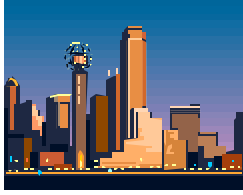


If the R&D credit results in a single, large, high-tech location moving to the state (measured by the average size of such facilities developed during the 1990s), the gains to Texas from this provision of SB441 rise to more than \$1.21 billion in Total Expenditures and 12,512 Permanent Jobs. Thus, given even one induced plant location, this measure brings notable additional gains to the state economy. The desired outcome, of course, is that the credit contributes to a long-term program in high-growth, emerging sectors.

b. Job Creation Tax Credit for Strategic Investment Areas

Most measures to promote economically-distressed areas constitute beneficial policy initiatives. There is, in fact, a general premise in modern academic conceptions of equity and justice that such initiatives should be regarded favorably. This notion applies in the economic arena for practical reasons as well; breaking cycles of low income and high unemployment can significantly ease burdens on the social services network and bring notable fiscal benefits over an extended time horizon. In particular, when examining the future of Texas, currently distressed areas, particularly those along the Texas-Mexico border and certain remote rural areas, are found to be vital to the state's overall economic well-being. Approximately two-thirds of the new jobs





generated in Texas during the 1990s resulted directly or indirectly from expansion of international trade. Mexico has been a major part of these increases and is likely, along with Central and South America, to have an even more significant role in the future. The economic health of the border region is key to ensuring the infrastructure, transportation, and workforce needed to fully capitalize on these emerging opportunities. Unfortunately, chronic unemployment, low wages, and infrastructure deficiencies characterize this region of the state.

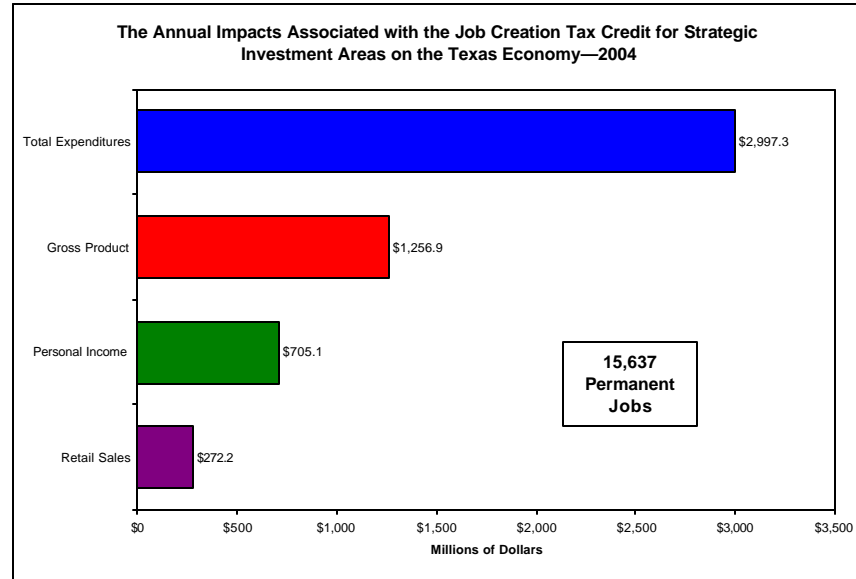
The creation of jobs is an important goal, particularly in economically distressed areas. In general, employers respond significantly to reductions in effective wage rates, and jobs are a highly visible manifestation of successful economic development programs. Because the location of business activity can be affected by tax-related measures, efforts to direct activity to the border and other distressed areas are likely to be quite beneficial to the future of Texas.

In recognition of these economic and fiscal realities, Senate Bill 441 created a franchise tax credit for job creation in Strategic Investment Areas for businesses engaged in agricultural processing, central administrative functions, distribution, data processing, manufacturing, R&D, and warehousing. Although there are specific parameters and limitations on the credit's use, it is expected to have a significant effect on the overall level of job creation, particularly in Strategic Investment Areas.

Using the TPG impact assessment system, the fiscal note on this provision, and current research on employer responsiveness to jobs credits, the overall stimulus to business activity from this measure is estimated as of 2004 to be approximately

- ✓ \$2,997.329 million in annual Total Expenditures;
- ✓ \$1,256.877 million in annual Gross Product;
- ✓ \$705.066 million in annual Personal Income;
- ✓ \$272.205 million in annual Retail Sales; and
- ✓ 15,637 Permanent Jobs.





The vast majority of these benefits will occur in the state's Strategic Investment Areas.

c. Investment Tax Credit for Strategic Investment Areas

As noted earlier, economic incentives lower the risks and costs of economic initiatives and, thus, can encourage additional business investment. The most straightforward method of accomplishing this objective is to offer a direct credit for investment outlays. Because programs of this nature become operative at the time a capital expansion project is undertaken, direct credits for investments are easily and effectively incorporated into the site selection process.

SB441 contains a tax credit for qualified capital investments of a minimum of \$500,000 in an amount equal to 7.5% of the investment. The credit is given in five equal amounts over a five-year period, may not exceed 50% of the franchise tax due, and is limited to counties qualified as SIAs or agricultural processing investments in counties of less than 50,000 population.

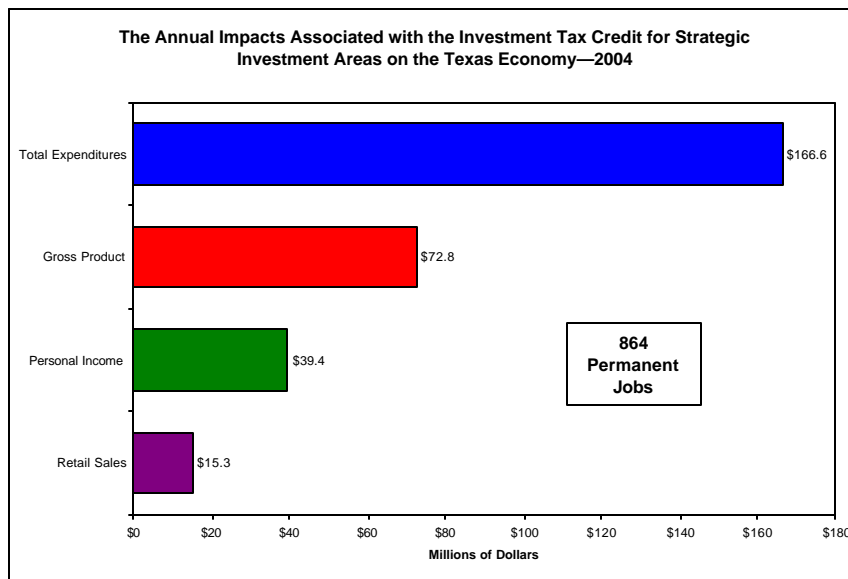
Based on the requirements of this provision and its fiscal note, the increases in business activity generated by this modest investment tax credit are, as of 2004, expected to reach

- ✓ \$166.580 million in annual Total Expenditures;
- ✓ \$72.793 million in annual Gross Product;
- ✓ \$39.415 million in annual Personal Income;





- ✓ \$15.299 million in annual Retail Sales; and
- ✓ 864 Permanent Jobs.



Again, these gains will be concentrated in the least advantaged areas of Texas.

d. Synopsis

The tax credit program in Texas is certainly important in principle and likely to generate substantial benefits. In fact, a dynamic fiscal analysis reveals that the relevant elements of SB441 will spur \$24.70 (\$26.73 if one major location occurs) for every dollar in foregone tax revenue. This measure also sets an important precedent for direct State involvement in creating incremental incentives for new activity.

However, the tax credit program in Texas is, quite frankly, inadequate in the current environment. As with many other measures, SB441 puts a significant set of restrictions on the credits which severely limits their practical value. Moreover, the magnitude of the R&D credit is not sufficient to attract major programs in emerging industries. As discussed at the outset of this report, several states have enacted broader measures. Similarly, the jobs credit and particularly the investment tax credit must be more extensive and apply to the entire state to be realistically competitive. The goal of encouraging development in economically challenged areas can be achieved by offering somewhat larger incentives than those available statewide. It must be recognized, however,





that some of the most desirable corporate locations are unlikely to opt for the Strategic Investment Areas. In fact, the greatest shortcoming of SB441 is that it failed to provide a mechanism to target major capital-intensive facilities. This weakness is overcome to some extent by HB1200, particularly if some of the cumbersomeness and uncertainty can be removed. The disproportionate burden on large plants stems both from the reliance on property taxes to fund public education and a franchise tax partially tied to capital asset values as the primary source of business revenue to the state. HB1200 has the potential to address some of the issues; a substantial investment tax credit would address the other. Given the intensely competitive environment in attracting high-tech plants, both are needed. In summary, the difficulties with the SB441 tax credit initiatives are not conceptual; the credits simply need to be increased in magnitude and extended in geographic coverage.

4. Job Training

Texas recently allowed its “Smart Jobs” Fund (SJF) to lapse in the aftermath of problems in its performance and administration. This left the state without an employer-driven training program. Texas maintains a Skills Development Fund which provides grants to community and technical colleges to meet local workforce-training needs. This fund is administered by the Texas Workforce Commission and is generally well regarded. Average training costs are modest (about \$1,000 per worker), and placement rates are generally positive. This program is not sufficiently targeted and focused toward major corporate locations, however, to be competitive nationally as a tool for economic development. (Texas also has a Self-Sufficiency Fund which administers federal funds to aid in the welfare-to-work transition. This program typically deals with skill levels at the lower end of the spectrum and is quite similar to those found in other states. Thus, while certainly worthwhile, it is not a source of either significant development incentives or comparative advantage or disadvantage and will not be examined in detail.)

Job training is of vital importance in vying for expanded business activity. It is also of particular significance to Texas because of (1) a rapidly growing and young population and (2) graduation and dropout patterns that are disturbing. Texas has the raw material to be a global leader in skilled workforce availability, but currently lacks the program capabilities to





make it happen. Given these facts, it is worthwhile to explore this issue and its overall framework in some detail.

Federal Workforce Policy Changes

In 1998, federal workforce policy underwent the first major overhaul in more than a decade with passage of the Workforce Investment Act (WIA). This Act has formed the basis for significant improvements in the coordination of various federal programs related to job training, adult education, employment services, and vocational rehabilitation. The WIA reinforced a structure of state and local workforce investment boards, helping keep control of strategic planning, policymaking, and oversight of the programs at a local level.

In addition, the WIA provides for universal access to one-stop career centers, regardless of eligibility for other services. This is a notable change from the Job Training Partnership Act (JTPA), which the WIA replaced. In essence, the WIA represents an important step toward a more rational system of federally funded workforce training and related services, but does not have notable effects on the relative competitiveness of various states and areas.

The State's Role in Training

There are compelling reasons for the State to play a major role in the training of Texans. State government represents a natural and logical entity to coordinate and facilitate various efforts. In addition, funding is a key aspect of this involvement. While there are federal and local funds available, a key component of the workforce training and education system must be paid for by the State. There is no doubt that Texas must offer a well-conceived system of training in order to be competitive. In fact, 45 states, including the major contenders for most large industrial locations, have such programs, many of which are highly regarded by corporations, site selection consultants, and the impacted workers. Some of these plans were examined in detail at the outset of this report.

In addition to the locally centered workforce investment boards established by the WIA, there are other efforts at the local level in the areas of training and education. For example, many economic development corporations work with higher education providers to facilitate workforce training for





companies considering locations. Such programs can be of great value. However, the level of resources available to local areas varies widely, and coordination at a statewide level is imperative to supplement these initiatives. The administration of such programs is often cumbersome and curriculum may lack the flexibility required to meet the needs of the most sophisticated, technology-oriented companies.

Traditional workforce development typically involves addressing two broad challenges: (1) meeting widespread skill shortages to avoid any future economic decline while encouraging growth, and, at the same time, (2) providing the skills many workers lack so they are able to obtain and hold jobs with adequate compensation to make them self sufficient. In recent times, training availability and related grants have surfaced as important economic development criteria. With demographics leading to a tightening labor pool and skill requirements increasing, the availability of skilled workers and effective training are often the most critical factors in choosing a location. The advantage in Texas is that there is currently no shortage of persons in key age groups.

It should be noted that an exemplary, employer-driven workforce-training initiative is but one piece in a very large puzzle. It is, however, an essential piece. Human capital is the cornerstone of the modern technological business landscape. If properly developed, a growing working-age population will fuel the Texas economy for years to come, in much the same way that fertile soil and mineral deposits did in earlier times.

Need for Training Programs

As the economy continues to evolve toward technology-based production methods and business solutions, required skills levels are rising in many occupations. This trend is expected to continue. The dynamics of today's global marketplace are also putting pressure on many workers to retool their skills in order to remain viable employees.

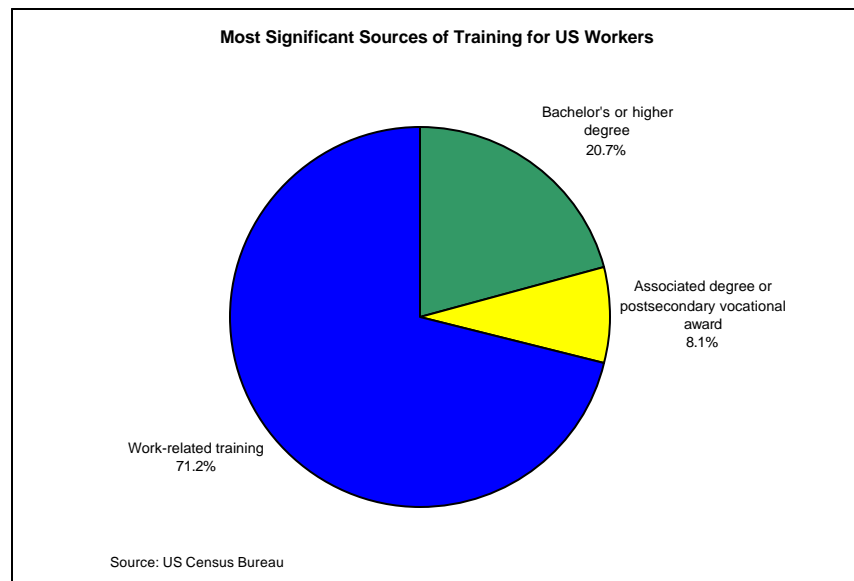
According to the US Department of Labor, there are 10 basic skills atop most employers' wish lists for their applicants: problem-solving, vocational-technical skills, human relations, computer programming, teaching-training, science and mathematics, money management, information management, foreign language, and business management. As industrial





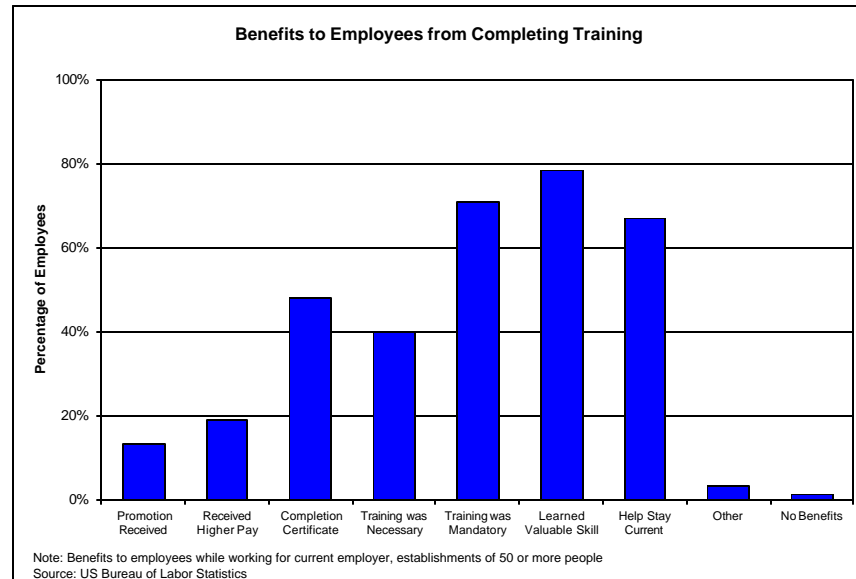
shifts occur, displaced workers are often left without the necessary skills to find work. At the same time, expanding industries may experience shortages of persons with the proper skills and emerging, high-growth sectors will inevitably cluster in areas with responsive training capabilities.

As discussed previously, the public education system is graduating a smaller percentage of Texans than the levels seen in other states. Moreover, the evolving economy creates a clear need for workforce training beyond the traditional public education system. In fact, a far larger percentage of occupations rely on work-related training as the most significant source of education or training than the proportion primarily utilizing higher education.



Technology, globalization, security, and the evolving structure of the economy will continue to change the way “business as usual” is conducted. To survive in this dynamic environment, workers will need advanced skills. There is a clear and measurable relationship between job training and wages. Additionally, training can lead to substantial productivity gains. Returns on training investments have been empirically measured and found to be significantly positive. Furthermore, employees receive other benefits from training, such as promotions and valuable skills which are transferable.



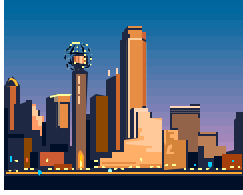


Simply for the sake of competition, firms have historically promoted job training and have absorbed the majority of costs associated with doing so. For many corporations, training employees leads to improved job performance, which in turn increases efficiency, and thus raises profits. In addition to profits, the most innovative firms—or those offering the best situations to employees in terms of benefits—exhibit the highest investments in employee training.

Nonetheless, times are changing and state leaders throughout the country have realized that a well-trained workforce is more than just a company asset. It has become a recruitment tool in the race for new capital investments, job growth, and new and expanding facilities. In fact, economic development professionals across the state and around the globe agree that the ability to offer quality training is often the deciding factor for firms considering various locations. When Illinois was selected as the best state in the country for economic development in 2001 (Texas failed to make the top ten), Governor George H. Ryan stated, “There is nothing more important to business then access to a highly trained and educated workforce.”

A 2001 study by Frost & Sullivan further illustrates the importance of a skilled workforce. Data from 406 company interviews (238 with companies undertaking a site selection project in the thirty-six months preceding the study and 168 with companies planning to do so in the thirty-six months





following data collection) were used to identify, among other things, the factors key to the site selection process.

These results indicate that ratings of site selection criteria for this study not only support but also strengthen the argument for a more effective skilled workforce-training initiative in Texas. The data indicate “labor” as the highest-rated site selection factor for both past and future projects. For virtually all industries, labor was more important than any other determinant in past site location projects. An examination of future site location projects revealed similar findings. Company size made little difference—all rated labor as important. Similarly, “education and training” was near the top of the list.

Many of the states Texas is routinely up against for quality locations offer significant training programs. Moreover, firms are increasingly treating such opportunities as a given when evaluating alternative sites. With the demise of Smart Jobs, there is an obvious and glaring void in the competitive mix. Texas must measure up or lose out.

The Smart Jobs Fund

The Smart Jobs Fund was established in 1993 by the Texas legislature to meet employer demand for highly skilled workers. The program was driven by the recognition that future expansion of high-growth technological industries required specialized, skilled workers and that the “peace dividend” was eliminating many excellent jobs in defense-related manufacturing. SJF awarded grants directly to employers in Texas for customized training with the hope of promoting the creation of new jobs and increasing the wages for existing employees. To obtain funding, employers had to provide at least a ten percent match or in-kind contribution, and pay their trainees a higher salary after they completed training.

By 1999, the state legislature had changed the scope of SJF, making it a more general, broad-based training program that would serve the needs of all sizes and types of businesses. The selection criteria was also expanded over time as well, encompassing factors (such as training former prison inmates) that, while laudable, had little or nothing to do with promoting emerging growth sectors. In short, the program completely lost its original focus and became somewhat





similar to the Skills Development Fund (differing primarily in the fact that funds were awarded directly to companies rather than educational institutions) and even the Self-Sufficiency Fund (which administers federal funds to support a welfare-to-work transition). When that happened, Texas lost a key part of its attractiveness for desirable site locations. Administrative difficulties further eroded the program, leading to its demise during the last legislative session.

In a January 2000 audit, the State Auditor's Office (SAO) found numerous problems in administrative and fiscal management. Their report stated that because of "gross fiscal mismanagement," program objectives were not met and funds were used inappropriately. Problems found by the SAO included loopholes in the contract provisions and weaknesses in the practices used to select contractors, establish contract rates, and monitor contractor performance.

A follow-up report in August 2000 indicated that the SJF awards between September 1995 and August 1998 were not consistently used to upgrade workers' skills and enhance employment opportunities in Texas. The Sunset Advisory Commission (SAC) found difficulties in telling whether the SJF recipients actually trained their employees, as well as evidence of a poor monitoring system. In light of these findings, SAC recommended that the Texas Workforce Commission (TWC) take over the responsibility of administering the SJF to increase coordination with other workforce development programs offered by the TWC (such as the Skills Development Fund and the Self-Sufficiency Fund) and to give businesses one agency to contact to obtain information on the state's job training programs.

To comply with recommendations made by SAO, Texas Economic Development in conjunction with the SAO, developed a 31-point corrective action plan. By January 2001, TxED had completed about 75% of the corrective actions outlined in the 31-point plan with others in process. Despite compliance with many of the SAO recommendations and the retention of competent and skilled personnel, the state legislature did not reauthorize TxED to process new applications, and the program was eliminated.

The program was also not well regarded by some of the companies that participated. Much of this difficulty, however, appears to stem from the fact that employers are not





accustomed to dealing with the bureaucratic aspects of the program to the extent that was necessary. In contrast, the Skills Development Fund primarily provides money to educational institutions accustomed to the process and, quite often, in desperate need of funding from any source.

The Smart Jobs program was funded by one-tenth of one percent of the Unemployment Compensation Tax. The amount of grant dollars awarded by the fund increased from \$7,663,049 in 1995 to a high of \$43,333,917 in 1999. The amount awarded in 2000 decreased to \$21,949,941. From 1995 to 2000, SJF distributed \$183,085,521 to 1,592 recipients and contracted for 156,420 trainees. For the 43,832 trainees that qualified for reimbursement, the average cost of training each employee was \$1,891 over the life of SJF. This funding mechanism is less than ideal, in that its capacity varies over the business cycle and often provides the least revenue at times of greatest need. If a dedicated funding source is required due to fiscal exigencies, however, it may well be the best available.

Many companies used Smart Jobs funds very effectively, contributing to economic growth and development across the state. For example, the Bell Helicopter Tilt-Rotor facility in Amarillo had an exemplary program which contributed greatly to the successful onset of its operations.

Much of the problem with Smart Jobs was the result of an evolving and at times amorphous mission; others were due to structural factors in its implementation (such as paying for training before it was completed and seeking reimbursements if criteria were not subsequently met). Additional problems were associated with frequent turnover in personnel, and some were simply bad management at various points in time. In any event, there is little productive purpose served by lamenting and rehashing the failures of the past. It is far preferable to learn from these shortcomings, and focus on pressing future needs.

While the Texas economy has recently outperformed the nation as a whole, the state is slipping in terms of new corporate locations as noted previously. If the situation persists or deteriorates, future economic performance will be jeopardized. Moreover, the state cannot hope to be a part of the high-tech, high-growth world of the future—which will encompass not only electronics and communications, but also





biotechnology, alternative energy, nanotechnology, smart materials, and other areas not yet invented—if it cannot offer employers the capabilities of a skilled workforce.

As noted earlier, the state's workforce represents the single biggest potential benefit or threat to economic growth over the decades to come. With a relatively large number of persons in the right age groups, Texas has the opportunity to be the destination of choice for firms in the future. However, the skill level of the potential employee pool is a crucial component. Without proper workforce development, the Lone Star State is left with a situation of a growing population and a shrinking number of persons with the proper skills for the jobs of the future.

Current programs leave a gap that a Smart Jobs-type program is needed to fill (given past history, it probably needs a new name and a new home, as well). Employer-based training is an indispensable component of the state's workforce development program. Without such a program, Texas stands at a significant, perhaps insurmountable, disadvantage in the arena of competition for quality corporate locations.

Components of a Successful Training Program

A crucial question in deciding the focus of any training program is a **clear understanding of the program's goals**. If the primary purpose of the program is to improve the situation for those Texans who are unable to find employment due to a lack of skills, a more broad-based program is appropriate. Such entry-level training should be left to the Skills Development Fund, the Self-Sufficiency Fund, and related initiatives. The Smart Jobs-type fund needs to be explicitly tailored to meet the training needs most likely to generate economic development in high-growth, high-skill sectors. Quality corporate locations can generate substantial spillover activity throughout the economy; this activity, in turn, leads to additional job opportunities for all Texans. While other goals are commendable and should be met by other means, this program must remain focused on its core objectives. Some type of "use it or lose it" provision could be implemented to assure that all parts of the state have access to the funds, but the essential purpose should not be diluted by such considerations.





Another **key aspect of any program should be a market focus**. A well-trained Texan is an asset to the economy; retention provisions such as the one in California may be less effective than simply allowing market forces to work. From the State's perspective, a training investment is valuable whether an employee stays at a company or changes jobs. In addition, requirements related to wage increases may be counterproductive. If individuals gain a valuable skill through training, their value in the job market increases. Employers must offer wage increases or risk losing the employee to another firm. However, because there is, in many cases, a lag between receipt of training and true productivity enhancement, forcing employers to increase wages on the basis of training alone is often not economically rational.

One of the most important tenets of success is spelling out the grant approval criteria. If economic development professionals, companies considering Texas, and everyone else can anticipate the likelihood of receiving a grant (and its potential size), the program can be a much more effective tool for economic development. In fact, there should be criteria spelled out for companies to qualify for essentially automatic grants. There are those potential site locations that are so clearly valuable to the economy of Texas and, hence, all Texans, that they should be granted immediate approval for training funds; for these top-tier locations, facilitating training grants is essential.

If the program is focused on high skills, with market demand and clear economic value, it is reasonable to include a "hard dollars" matching provision to ensure that the training undertaken by firms is economically rational. If firms are paying a portion of the cost in some manner other than in-kind services, they will allocate their resources in such a way as to maximize the benefits of a well-trained workforce. Such requirements should not, however, be so onerous as to dilute the incentive benefit and should not preclude the state from competing for major facilities which require that full training costs be absorbed. Considerable discretion could be allowed regarding the mechanisms used for the training (in-house personnel, public or private institutions, individuals with the required skills, etc.). Similarly, providing the funds after the fact (assuming well-established and clear criteria) can minimize monitoring and administrative burdens when assuring that State fiscal resources are prudently deployed.





Approximately 30 states administer their programs through the economic development agency; others use the employment agency or a separate entity entirely. The advantage of TxED is the constant and consistent focus on economic development; the disadvantages are being less accustomed to administering large workforce programs and the “baggage” that is left over from past (real or perceived) failure in managing the Smart Jobs program. The TWC brings the obvious advantages of experience, coordination, and proven efficiency. The disadvantage is that **this program, ideally constructed, has fundamentally different objectives than other programs and must be treated accordingly. It is an economic development program first and foremost.** While it should be evaluated for effectiveness, its objectives are not the total number of persons trained, initial salary increases, or employment tenure. Rather, a Smart Jobs-type program should be assessed based on its contribution to the location, retention, and expansion of high-tech, high-growth initiatives. This approach clearly requires a different focus than is used on other programs administered by the TWC. It must further be characterized by both rapid response and ongoing coordination with economic development officials. On balance, it appears that, while at this point the relative advantage is probably at TWC; nonetheless, the focus on economic development is essential.

It should be pointed out that it is beyond the scope of this effort to provide all of the “nuts and bolts” of a comprehensive suite of training programs. The above suggestions merely reflect observations from the field and an analysis of the programs available in other states. The key elements are simply that the program be development-focused, employer-based, flexible, market-driven, certain, and able to respond rapidly.

The economic benefits of training are clear. They accrue to the individuals receiving the training, the companies employing them, and the economy as a whole. The optimal mechanism for Texas workforce development is a concerted effort involving both public- and private-sector entities.

In addition to the positive effects on the economy, workforce development facilitates the generally accepted social goal of minimizing the negative effects of unemployment, underemployment, and other job dislocations. Without a





doubt, there is a need for a superior workforce-training program delivering on-target solutions to these challenges.

Many studies of workforce training utilize the “human capital model.” Essentially, this theory treats training as an investment decision. Firms invest in training when future productivity gains make such investments profitable. Individuals will choose training when they believe future wage gains more than offset the costs of the training. Tipping the scales of this relationship by lowering costs of training can lead to an increase in the aggregate skill level of the workforce. Increased training benefits not only those involved, but also the state economy and, thus, all Texans. In the future economy, employer-driven initiatives are an essential element of this process if the state is to be competitive.

5. Enterprise Zones and Related Programs

Texas has a generally successful Enterprise Zone program. This initiative is designed to encourage investment and job creation in disadvantaged areas. Facilities locating in these zones and meeting certain other criteria are eligible for a package of incentives from state and local governments. The state provides sales and use tax deductions and franchise tax reductions, as well as eligibility to compete for other benefits based on funding availability. Local entities may provide property tax abatements, job training, utility discounts, sales and use tax refunds, low-interest financing, or a variety of other inducements negotiated on an individual basis. This program works well with certain capital access mechanisms available within the state in leveraging incentives in economically-distressed areas.

This program has been quite popular since its inception in the late 1980s. Approximately 200 communities have created zones, and more than 480 businesses have benefited as enterprise projects. Investment has exceeded \$12 billion and, when existing projects mature, about 100,000 jobs are anticipated to be created or retained.

Despite the relative importance and success of the Enterprise Zone program, substantial growth in the number of zones is not expected under current guidelines. Most eligible communities wishing to take part in this initiative already have their zones established, although they will continue to operate.





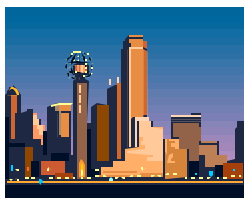
Many of the smaller communities and businesses that might otherwise participate are reluctant because of the sheer complexity and expense relative to the benefits. The total state incentives over the entire history of the program are less than \$40 million (less than 0.4% of total incentives). In fact, many economic development professionals and community leaders believe that the bureaucratic obstacles are counterproductive to the program. Because of the extensive review and reporting requirements and the ongoing addition of new businesses in several existing zones (thus necessitating a substantial approval process), the program administration appears to be underfunded and understaffed.

In evaluating Enterprise Zone practices and their track record, several potential reforms may be readily identified. First, zones could be pre-established based on economic criteria (or other comparable designations such as Strategic Investment Areas). This approach would eliminate or simplify a highly arduous application process. Designations could also be for longer periods of time. Texas currently establishes Enterprise Zones for a seven-year period; there appears to be no compelling reasons for this time frame which, when combined with a complex process, leads to substantial paperwork burdens relative to benefits. Similarly, Texas requires separate nomination and certification of each business within the zone. Most states tend to allow any firm located within a zone which adheres to the basic guidelines to be eligible for benefits. If changes such as these were implemented, it could also potentially allow more resources to be directed to productive endeavors such as aggressively pursuing additional federal funds available for disadvantaged areas.

In addition to the Enterprise Zone program, Texas also has Defense Economic Realignment Zones, which are similar to Enterprise Zones and encompass areas adversely impacted by the military realignment and procurement changes which have been occurring over the past several years. The State administers a Federal Empowerment Zone initiative for economically-distressed areas, and maintains certain incentives (previously discussed) for Strategic Investment Areas.

Local governments may also establish Reinvestment Zones in which they grant property tax abatements over a 10-year period. The state grants limited tax refunds to firms in





Reinvestment Zones that receive city and county abatements but do not receive benefits from local school districts.

In summary, Texas has several types of geographic designations designed to assist economically disadvantaged areas, with Enterprise Zones being by far the largest in terms of state involvement. These programs reflect the importance of ensuring prosperity, and in some instances, even sustainability in certain segments of the state. As a general perception, they are viable and useful in principle, but could be made much more effective and efficient through concerted efforts directed at streamlining, simplification, and eliminating unproductive overlap.

6. Capital Availability

One of the greatest impediments to economic growth in the US (and around the world) is the availability of financing for entry-stage companies and small businesses. Because of the nature of mechanisms used by private entities to determine eligibility and the risk-return requirements typically maintained, this difficulty is often magnified in low-income or otherwise disadvantaged areas. Financing options are also often needed by local communities to ensure adequate infrastructure and site specifications to facilitate locations, retentions, and expansions. The industries which are likely to be high-growth sectors in the future often require extensive capital in their formative stages due to expensive and lengthy research and development processes and complex issues (such as federal regulatory approvals) involved in reaching marketability status.

Texas has numerous initiatives that assist with capital access, the more prominent of which will be reviewed below. At a more general level, there are some overall causes for concern. In a perfectly efficient market, money gravitates to its highest and best use based on the optimizing preferences of investors. Under such ideal circumstances, financial capital would flow into high-growth sectors and regions at the expense of less attractive alternatives.

In reality, of course, such circumstances do not exist and, even if they did, the overall welfare of Texans might well justify efforts to channel capital into areas not otherwise able to attract it. Simply stated, economic growth requires money! Period! Without access to capital, firms are unable to make





the resource commitments necessary to (1) achieve and maintain competitiveness in the global economy and (2) implement emerging innovations. Throughout the history of the modern world, credit restrictions have inevitably been accompanied by reductions in business expansion.

There is perhaps no place where this phenomenon is more apparent than in Texas. The Lone Star State has been a net importer of capital since before it was the Lone Star State; the vast region depended on external sources of funds even during its early days as an independent republic. Throughout most of its history, Texas maintained a Populist tradition in its banking system; branch banking, interstate banking, and significant concentrations of financial power were prohibited.

These limitations were eliminated in the wake of the banking crisis of the 1980s and early 1990s, ushering in a rush of acquisitions by large national organizations. More recently, the quest for efficiency in an increasingly complex global environment has led to rapid and ongoing consolidation in all aspects of money and investment markets. The result has been the emergence of extremely large corporations offering a broad range of services.

One of the consequences of this phenomenon is the absorption of local, community-based initiatives by these mammoth institutions. Banks that were once central to their local economies were transformed by the thousands into minor branches with the primary function of generating deposits to support major corporate loans and generic consumer credit. While smaller banks have emerged (quite successfully, in many instances) to meet the specialized needs of established businesses which fall outside the optimal size parameters of the major national institutions, the drain on the traditional deposit base significantly constrains the progress of local economies. In fact, discussions with many in-state lenders revealed that they virtually require a partial guaranty from the Small Business Administration (a federal agency) to even consider making small business loans.

Texas has been relatively successful in attracting capital from outside sources in recent years. Many large Texas companies have excellent access to public markets and global sources for funds. The state generally ranks reasonably well in attracting venture financing, a fact which is closely tied to its concentration of activity in high-tech sectors.





The establishment of home equity lending a few years ago, after more than a century of resistance, also freed up substantial amounts often used as seed money for startup enterprises. Financial executives generally expressed concerns that restrictive conditions associated with home equity lending in Texas relative to other states created a competitive disadvantage for the state.

Despite some signs of success, there is evidence that Texas is handicapped in the area of bank financing. **As a large, diverse state that does not headquarter a major national banking organization, Texas lags significantly behind many other parts of the country with regard to its loan-to-deposit ratio.** In particular, Texas ranks 48th among the 50 states and well behind major competing states (such as Ohio, North Carolina, New York, and California) that are home to substantial banking organizations. These numbers do not give a completely accurate depiction of the lending environment because of both the manner in which the data are reported and the methods by which some loans to large corporations doing business in multiple states are recorded. Performance also varies markedly across institutions, and many types of credit are not reflected. In all probability, the magnitude is somewhat overstated. Nevertheless, the extremely low ranking of Texas even relative to small states that are not locales for major bank headquarters indicates that a real problem does indeed exist. In fact, Texas has been dubbed as a “deposit colony” by key industry observers. As a result of this situation, it appears that Texas loses billions of dollars in critical business credit each year and suffers corresponding losses in output, income, and jobs. This pattern is especially troublesome in less prosperous regions, such as rural Texas, inner cities, and along the Texas-Mexico border, where loan-to-deposit ratios are often at alarmingly low levels. This finding has been further reinforced by data from bank acquisitions in which Texas branches were involved in transactions.

Although this issue is quite complex, the following basic policy initiatives merit consideration:

1. Encourage greater disclosure from financial institutions competing for public (state and local) deposits. Such disclosures cannot be compelled as a result of federal guidelines. It would seem that such information could, however, be sought on a voluntary basis. If an institution





has a good track record, it should have no reason to conceal its performance. Moreover, lending practices vary across banks, and voluntary disclosure would permit those with better records to be recognized for their efforts.

2. Consider local lending practices as one evaluation factor when deciding where to deposit public (state and local) funds. Any such initiatives would have to be balanced with the fiduciary responsibilities associated with managing public resources. It would seem, however, that the long-term (at times, perhaps, in conflict with the immediate) economic interest and fiscal integrity of an area is best served by fostering access to capital by local firms and individuals.
3. Apply greater “moral suasion” by widely disseminating the publicly available information regarding lending practices. The Office of Advocacy of the Small Business Administration makes some of this information available related to rural lending, but it does not seem to receive much attention. If public policy were to result in the release and widespread awareness of such information as it relates to areas with capital access issues, it might impact private-sector behavior with regard to deposits and other transactions.
4. Recognize that, on a broader level, many of the capital access problems may well be another manifestation of a general set of challenges, as discussed at length in previous sections, plaguing low-income and disadvantaged areas (such as educational opportunity and achievement, job opportunities, infrastructure, and healthcare access). To that extent, overall programs to address poverty and promote economic development may also assist with credit issues. To specifically address credit availability, it might be useful to include basic financial management, small business finance, and venture finance concerns in the curriculum of local community colleges. It would be particularly useful if (1) such classes were available on a continuing education basis instead of only in formal degree programs and (2) local lenders were involved in the classes. It would also be helpful if the most adversely affected areas of the state could establish business incubators and seed/venture capital funds and networks. Such efforts





should include both funding and expertise in business management. It might be possible to use funds from the local economic development sales tax as part of a public-private partnership to implement these programs.

Having explored the overall Texas credit situation, a brief focus on statewide programs is now provided.

Texas has several programs which contribute positively to capital access for purposes related in some fashion to economic development. The Texas Leverage Fund, which accelerates use of 4A and 4B sales tax proceeds, has already been discussed, as has the use of sales tax bonds secured by 4A and 4B revenues. Local areas have also had Industrial Development Corporations which, for many years, have been able to issue bonds of lengthy maturities to finance both land and facilities for manufacturers. In order to be tax exempt, these bonds must be recognized under a private entity bond value cap maintained by the state. This type of program has been around for many years, and similar programs exist throughout the country.

Texas also has a Texas Capital Access Fund program to assist “near bankable” businesses in obtaining financing and building ongoing relationships with lending institutions. The Fund contributes to a loss reserve (along with the borrower and the lender), thus reducing the risk associated with the loans. It is open to a broad range of small, moderate-sized, and non-profit entities and can be used for a wide variety of purposes.

Since its inception in 1997, the State has committed less than \$3 million to the program. It has assisted in almost 40 times that amount in loans which have positively impacted more than 10,000 jobs. Because it has been used at levels well below appropriations, funding at acceptable levels is in jeopardy (even though the program is self-supporting through interest earnings and very cost effective). This type of program is available in approximately 20 states, including most of those which are significant competitors for business activity. To achieve its potential, the Capital Access Fund program needs to be more widely publicized and made available on a more significant scale.

A similarly named, but structurally quite different, program is the Texas Public Facilities Capital Access Program (TEXCAP)





maintained by the Texas Small Business Industrial Development Corporation. In essence, the program involves lending funds for projects related to land, buildings, equipment, and facilities which are determined to be suitable for development and expansion in public infrastructure and facilities. The program has been in existence since the 1980s.

Still another program with a comparable name is the Texas Capital Fund administered by the Texas Department of Agriculture. This initiative provides funds for (1) the Infrastructure Grant Program (up to 50% of the cost of water or wastewater facilities, electric power lines, roads, natural gas lines, or rail spans to promote business growth or expansion), (2) the Real Estate Development Program (up to 50% of the cost of real estate projects to aid businesses locating or expanding in an area and providing new or retained jobs for low or moderate income workers), and (3) the Main Street Program (up to 50% of the cost for a variety of projects in selected cities seeking to revitalize downtown areas). All of these options are available to rural counties (less than 200,000 in population) and small communities (less than 50,000).

Bonds may also be issued on a tax-free basis (with some limitations) for certain exempt facilities such as docks, warehouses, hazardous waste storage locations, airports, high-speed rail corridors, sewage and solid waste treatment plants, electric power and natural gas lines, and other forms of infrastructure. Empowerment Zone Bonds may also be implemented to assist businesses bringing workers within these federally-designated areas in certain categories of construction, renovation, or purchase of a property. These credit instruments are similar to Industrial Revenue Bonds, but are somewhat less restrictive in terms of their requirements.

While the bond programs examined above are directly tied to economic development, there are numerous other entities within Texas with similar borrowing authority to support projects which enhance the state business climate. As a general perception, these initiatives are quite comparable to those in other states. To the extent they serve to accelerate infrastructure development or other needed outlays in a responsible manner based on proper cost-benefit analysis, such programs can positively impact long-term growth.





A final credit program worthy of note is the Linked Deposit Program, which is managed by Texas Economic Development. Its purpose is, like several other efforts, to provide an enhancement incentive to encourage private-sector lending to historically underutilized businesses (HUBs), child care providers, non-profit corporations, and entities located in Enterprise Zones. The Texas Department of Agriculture has a similar program for projects related to rural development (value-added production, alternative crops, water conservation, or development in federally certified disaster areas). Within these programs, the state earmarks funds to be deposited in the lending institution (which must be a State Depository Bank) at low interest rates, thus lowering the cost of capital to the borrower. The State funds are not collateral, and the loan is subject to standard credit review. This concept works well, but its use is limited. The TxED effort has assisted less than 20 projects since its inception in 1995. This statistic may well reflect the facts that (1) using funds in this manner conflicts with the general objective of the State money managers to maximize the yield on public resources, and (2) the program has not received substantial marketing or administrative support.

A missing weapon in the arsenal of Texas is a substantial program to encourage seed capital and venture capital for new industry development. Such programs are important to small areas that must generate much of their growth from within, but it is equally important in fostering the development of high impact, emerging technology sectors. The Governor's Council on Science and Biotechnology Development has identified this factor as an essential critical element in an effective strategy for successfully attracting these critical engines of future growth.

There are many models which could be implemented, but they all are derived from the same basic conceptual framework. As discussed earlier, efficient financial markets direct funds to optimal uses. The early stages of firm and product development, however, do not come close to meeting the information criteria necessary for optimal resource allocation. Small enterprises, new inventions or innovations, and bright ideas happen in myriad places without an organized way of communicating and disseminating their knowledge and existence. Seed capital investors seek projects in many diverse sectors, but do not have a systematic vehicle to locate promising new activity. While both sides try to find one





another, the mechanism is not as well developed as is the case with stocks, bonds, and commodities. Because of this relative inefficiency, areas that make funds more readily available can reduce search and transaction costs and facilitate financing, thereby gaining an important competitive advantage in encouraging internal development. This process is particularly effective with emerging growth sectors that require extensive early-stage resources prior to commercialization and profitability.

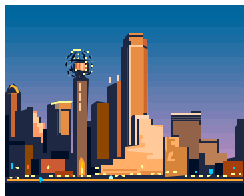
Devoting a small percentage of the state's investment funds to such enterprises in an effective manner can be both lucrative and an invaluable tool for business expansion. Fostering incubators which provide resources to desirable firms can also be effective. Facilitating research funding and technology transfer can pay handsome dividends for generations. Many of these initiatives can be achieved in public-private partnerships with minimal out-of-pocket outlays.

In summary, while Texas has generally attracted capital for the better part of two centuries, there are critical issues of access which can markedly impact growth prospects. To be competitive, the state needs to enhance its role in this area. The creation of a high-profile state Economic Development Bank to provide a more extensive program of credit enhancements, linked deposits, direct loans, or other programs using appropriate financial criteria could enhance the viability of existing programs and promote more flexible and innovative strategies to pursue job creation and retention opportunities. This approach can also be implemented in a very cost-effective manner.

7. Inventory Taxation

Texas generally includes inventories in transit within the state in the property tax base of local governmental entities. With the increasing reliance on property taxation and significant rate hikes in recent years, the resulting level of taxation has been quite onerous, particularly in comparison with neighboring states. A "freeport" statute allows areas to exempt goods remaining in the state less than 175 days for purposes of assembly, storage, processing, manufacturing, or fabrication. This exemption is not widely applied, as most areas choose to maintain the tax base for municipal services. Voters recently approved a constitutional amendment (which would require enabling legislation) to allow the exemption





period to be extended to 270 days and to have the exemption applied to goods-in-transit whether or not they remain in the state.

This proposed expanded program concerns some jurisdictions because of the potential foregone fiscal revenues, but it is readily apparent that (1) areas with the current freeport exemption (such as Fort Worth Alliance Airport) have performed extremely well and (2) in general, much of the warehousing and related transportation activity associated with goods sold in Texas markets occurs in other states. Documented cases have been compiled involving thousands of jobs and millions of dollars, and there is no doubt much more which is not explicitly known. This lack of competitiveness in a key component of the supply chain imposes substantial economic losses on the Texas economy, thus preventing the achievement of its full potential.

Impact of Lost Activity Stemming from the Inventory Tax

The Perryman Group recently quantified the impacts of not being competitive in this arena under these alternative sets of conditions. In the first scenario, TPG identified the **warehousing losses to neighboring states**. In particular, the excess growth in this sector in Oklahoma, New Mexico, Louisiana, and Arkansas over what would be expected as a consequence of internal economic expansion was determined. This level of increase is generally attributable to firms located near Texas to serve its markets. A substantial percentage of this foregone opportunity has been directly identified by members of the Texas Warehouse Association who lost specific business opportunities. This scenario represents a lower bound on the adverse effects of inventory taxation in that (1) it does not account for losses to other states, such as Missouri, Nevada, and Ohio, which aggressively market their attractive inventory taxation programs, and (2) it represents far less warehouse expansion than would have been anticipated in Texas, other things equal, given its overall pattern of activity.

Specifically, Scenario I reveals a loss of \$236.7 million in direct income and 5,978 direct permanent jobs. The aggregate economic impact of these losses is estimated to be net declines of





- ✓ \$1,233.2 million in annual Total Expenditures;
- ✓ \$716.8 million in annual Gross State Product;
- ✓ \$452.6 million in annual Personal Income;
- ✓ \$85.2 million in annual Retail Sales;
- ✓ \$19.1 million in annual State Fiscal Revenues; and
- ✓ 11,336 Permanent Jobs.

Thus, **even under a conservative set of assumptions, the inventory tax policy of Texas is shown to have substantial adverse consequences for overall business prosperity.**

As would be expected, there has been a significant long-term correlation (approximately 99%) in Texas and elsewhere between growth in manufacturing output and warehousing operations. In recent years, however, Texas has lagged behind this pace. **If the expansion in warehousing had kept pace with other segments of the economy (Scenario II), the state would currently be enjoying \$410.1 million in additional direct annual income and a 10,358 direct employment increment.**

The total effect of these losses on the economy includes decreases of

- ✓ \$2,137.0 million in annual Total Expenditures;
- ✓ \$1,244.0 million in annual Gross State Product;
- ✓ \$784.3 million in annual Personal Income;
- ✓ \$147.6 million in annual Retail Sales;
- ✓ \$33.1 million in annual State Fiscal Revenues; and
- ✓ 19,644 Permanent Jobs.

The findings for this simulation illustrate the gains Texas could expect if the warehousing industry expands in accordance with historical patterns relative to the overall economy.

The first scenario examined the losses experienced directly to neighboring states. The second explored the losses relative to Texas' overall economic performance. The final scenario explores the prospects for the warehousing sector if Texas had a program that was competitive with other states as part of a comprehensive economic development strategy. To quantify this segment of the analysis, TPG calculated the increments Texas could anticipate if it achieved growth rates comparable to those in neighboring states (all of which have less onerous inventory tax provisions).





If Texas warehousing performed at the average level of the surrounding states, the net direct gains would be \$540.1 million in income and 13,643 permanent jobs. The economic impact of this loss on activity is

- ✓ \$2,814.5 million in annual Total Expenditures;
- ✓ \$1,635.8 million in annual Gross State Product;
- ✓ \$1,032.9 million in annual Personal Income;
- ✓ \$194.4 million in annual Retail Sales;
- ✓ \$43.6 million in annual State Fiscal Revenues; and
- ✓ 25,871 Permanent Jobs.

Therefore, it may be readily seen that Texas stands to reap significant rewards from elimination of the punitive inventory tax provision and that an initiative of this nature warrants serious consideration. Given the current status of school and municipal finance, however, some accommodations of local fiscal requirements would be necessary.

8. Other Initiatives and Federal Programs

There are several other opportunities to promote economic development within the state. These programs are comparable to those in most other states and, thus, while important, do not require extensive comment and analysis. Cities are allowed flexibility (under Chapter 308 of the Local Government Code) to use loans, grants, access to staff and services, and other inducements to promote local activity. Municipal governments have broad discretion in such efforts, obviously subject to other needs and appropriate standards of fiscal responsibility.

Cities also make use of **Tax Increment Financing (TIF)** to support projects in defined areas. Infrastructure and other public improvements are undertaken to attract new development or enhance the viability of existing firms, particularly in economically-distressed areas. TIF areas are established by cities and are funded by dedicating all or part of the incremental tax revenue (over an established base) for the city and other local jurisdictions to the cost of the project. They may be used for construction or acquisition of utilities, water and sewer facilities, streets, parks, pedestrian areas, parking, educational facilities, and flood and drainage facilities. This mechanism may also facilitate the renovation of blighted and deteriorating segments of a city. The tax





increment is limited to the increased value of real property, and the mechanism is quite popular with real estate developers and investors.

The state also has numerous tools which enhance the overall business climate. Sales tax exemptions apply to a wide range of goods which support economic expansion, including (among others) equipment used in manufacturing and utilities (electric and natural gas). The Texas Department of Agriculture maintains several programs to assist agribusiness operations, and several agencies have some type of development function. Texas Economic Development assists economic development corporation officials, and many universities and colleges have useful programs which particularly impact their primary service regions and the state as a whole.

Various federal programs which promote economic development are also administered within Texas. These include the **Community Development Block Grants** and other specific initiatives funded by the US Department of Housing and Urban Development (HUD). The grants, some of which are overseen by the newly created Office of Rural and Community Affairs, can be useful to communities that are qualified ("entitlement" areas) based on criteria related to economic need. HUD also has a program which allows those funds to be used as collateral for loans to facilitate their use. HUD provides additional credit enhancements for the loans and also offers Economic Development Initiative grants.

The Small Business Administration has a **loan guaranty program** which assists small businesses in securing bank credit; the SBA also works with non-profit Certified Development Companies (CDCs) in an initiative to provide long-term fixed rate loans to companies to acquire major assets. The CDCs, which serve defined geographic areas, work with both the SBA and private lenders to finance capital assets.

The federal government also provides myriad grant programs (defense realignment, low-income housing, research, job training, etc.) which can positively impact overall economic progress in numerous contexts. Because all of these programs are available throughout the country, they do not provide Texas with any type of competitive advantage relative to other states. In fact, Texas frequently fails to provide





staffing levels or matching commitments sufficient to fully capitalize on available federal funds and does not receive an optimal share. One of the key components of the strategy outlined by the Governor's Council on Science and Biotechnology Development involves maximizing the accessibility of federal funds to support technology research and development. Texas needs a greater general effort to maximize its access to federal resources and to positively impact federal policy. For example, the upcoming defense realignment process places many military bases in Texas at stake. These installations represent billions of dollars to the state economy each year, and aggressive efforts to minimize losses and dislocations in Texas seem warranted. Failure to fully exploit federal opportunities (when the benefits outweigh costs) can handicap overall competitiveness in multiple contexts.

9. The Missing Link: Strike Force Capability

The comprehensive examination of activity from other states and the review of programs in Texas revealed several areas in which Texas lags in key incentives to promote future growth. Several such gaps were discussed above, the most notable of which at present is an employer-driven job training mechanism.

One other initiative which Texas is totally without and which is becoming increasingly important is what is typically termed a "strike force" capability or "deal closing" fund. This mechanism is nothing more than a sum of money earmarked for use by the Governor (perhaps with the joint consent of some small group of other key officials such as the Lieutenant Governor, Speaker of the House, and Comptroller) in a discretionary manner in negotiating with large-scale potential employers. The purpose of such a fund is to permit some decisions of a reasonable magnitude to be made quickly without having to be the subject of bureaucracy, delays, or uncertainty. Examples might include some type of infrastructure (such as an exit ramp from a highway), focused job training for startups, modest environmental remediation, or any other required investment.

The critical nature of this capability stems from (1) the rapid pace of decision-making in some site selection processes and (2) the inability to completely anticipate all potential needs and create seamless and comprehensive access to responsive





approaches. This situation can be particularly problematic in Texas where the legislature is only in session five months each biennium. While measures have been approved in a timely manner by wide margins in a few instances where substantial projects were at stake, flexibility is often required on a continuing basis during the interim months when the legislature is not in session. Texas is also confronted with the fact that virtually all significant competing states now have such a process, thus putting Texas in the position of often saying “maybe” while competitors can immediately and with certainty say “yes.” As the direct involvement of governors in the recruitment process has expanded over time, this capability has become part of the basic toolkit. In fact, this type of program is and has been so common in the past few years that site selection consultants and prospects take it for granted. Similar capability is an essential element of any credible and competitive economic development program.

10. Synopsis

While incentives may not be particularly attractive in principle, they are an essential aspect of the contemporary quest for sustainable economic growth. Informed and sophisticated firms in a global marketplace work aggressively to improve their profitability. One established mechanism is to minimize the costs associated with major new facility investments and subsequent operations; inducements from areas seeking aggressively to attract locations and jobs thus become a fact of life. The fundamental functions of government are essential to creating the desirable framework to be a meaningful competitor for business expansions and locations. Nonetheless, the “incremental” sweeteners are essential to ultimate success.

Texas has numerous incentive programs to meet a variety of needs. Some are aimed at assisting small businesses or disadvantaged areas; others are designed to attract and retain major employers; still others seek to encourage research and development and other initiatives suited to gaining a significant presence in emerging high-growth sectors. Unfortunately, a long-standing bias against such inducements and a fiscal philosophy and measurement approach that fails to account for full dynamic benefits to the economy (and fails to recognize that while unused incentives from unsuccessful efforts may have no immediate adverse fiscal impact, they also have no long-term positive effect on prosperity) has





resulted in a non-competitive development agenda. Many basic incentives are funded at levels only a fraction of those found in other large industrial states, and some are missing entirely from Texas' portfolio of inducements. Despite current budgetary constraints, it is imperative that Texas take the necessary steps to buy a ticket to the dance. To do otherwise is to put the state on a permanently lower growth path than justified by its underlying assets, resources, and potential.

C. Marketing Texas for Economic Development

Another key element of an effective and comprehensive program for promoting long-term growth is an effective marketing effort. Much as campaigns to promote tourism focus on reaching potential visitors and conventions, economic development strategies must reach prospective firms, site selection consultants, senior executives, and others who notably impact the location process. Many states have very successful, well-funded marketing systems. While such promotional efforts do not in and of themselves recruit new activity, they increase awareness of the state and its strengths and help to generate leads and a "deal flow" for the state as a whole and various local communities. Thus, they complement and extend local recruitment initiatives, which often depend directly on available opportunities. This segment of the analysis examines tourism promotion and business development strategies. This investigation reveals the virtual requirement for both a more flexible and comprehensive tourism program (although the current efforts have performed quite well) and an extensive marketing effort aimed at corporate locations, trade opportunities, and other potential job creation prospects.

1. Tourism Marketing

Texas Economic Development has maintained a well-regarded tourism marketing plan for many years. Substantial revenues are also committed by the Texas Department of Transportation, while several other agencies play a role in some aspects of providing tourism services (the Texas Commission on the Arts, Texas Historical Commission, Texas Parks and Wildlife, etc.). While attracting visitors to the state is properly regarded as primarily a service effort, it nonetheless contributes to net growth in the economy. When people from other states or countries come to Texas, they bring money from outside areas and circulate it within the

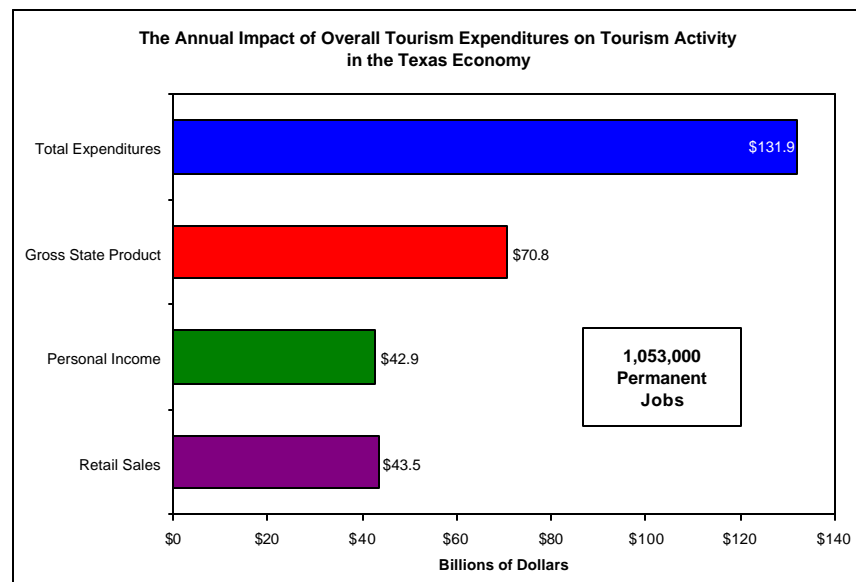




state. This pattern is precisely the same in principle as that associated with large-scale manufacturing operations, although the resulting multiplier effects are generally smaller in magnitude.

The basic focus of the effort is the well-known advertising campaign with the slogan “Texas. It’s Like a Whole Other Country.” Texas is the second most popular destination in the country, and has seen substantial increases in many key measures over the past decade. **Between 1992 and 2000, travel spending rose by 68%, hotel room nights by 41%, and tourism-related taxes by about 80%.** Direct spending now reaches \$40.4 billion annually, with estimates by The Perryman Group of aggregate overall yearly impacts of

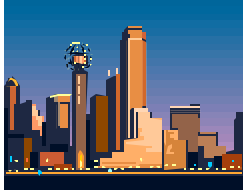
- ✓ \$131.9 billion in Total Expenditures;
- ✓ \$70.8 billion in Gross State Product;
- ✓ \$42.9 billion in Personal Income;
- ✓ \$43.5 billion in Retail Sales; and
- ✓ 1.053 million Permanent Jobs.



While final statistics are not yet available, tourism has seen some decline since the terrorist attacks on September 11, 2001. TxED launched “Howdy Neighbor” and “Rediscover Texas” campaigns to partially offset the adverse consequences of 9/11 and the national economic slowdown.

The marketing of Texas as a destination includes extensive advertising in out-of-state and international markets including





publications, television, radio, and the Internet. It also encompasses a travel research program and a series of partnerships with local tourism groups, other state agencies, businesses dependent on travel, and relevant industry and trade associations (Texas Hotel & Motel Association, Texas Restaurant Association, Texas Travel Industry Association, etc.).

The tourism promotion efforts are funded by a dedicated increment of the state occupancy tax. This source, which has been available since the launch of the “Whole Other Country” ads in the late 1980s, has provided a gradually increasing revenue stream to insure ongoing resource adequacy. The marketing initiative includes substantial components aimed at Canadian, “winter Texan,” and Mexican tourists and involves numerous cooperative projects to provide both cost savings to visitors and the availability of extensive information. The campaign also includes elements specifically designed to assist in attracting tourism to rural and border areas. The program has embraced the technological synergies afforded by the Internet to more easily reach prospective customers throughout the world.

The statistics and facts regarding tourism growth certainly indicate a significant measure of success. In particular, the Texas “market share” of the US travel industry has modestly increased over time. On the other hand, there are indications that more can be accomplished and that substantial competitive threats loom on the horizon. Despite the impressive achievements, Texas as a whole (though not all regions of the state) remains a net importer in key sectors such as hospitality and amusements. In other words, more Texas tourism dollars leave the state than those that come in from other parts of the nation and the world.

Texas is also beginning to slip in the rankings of its promotional efforts. While Texas ranked first in tourism advertising in 1995, it has since been overtaken by three other states. While the Texas program has increased by 75%, in recent years, the average of the ten largest states has grown by 114%. Even these trends fail to capture the complete situation. Because of appropriations, staffing, and funding limitations, Texas devotes 74% of the TxED tourism budget (52% of the total including the TxDOT funds) to advertising, compared to a national average of 34%. The result is that other parts of an overall program (such as Internet





development and research) do not keep pace. Texas ranks fifth in total travel budget (including TxDOT funds), with three individual states almost doubling the Texas amount. Flexibility is also constrained by legislative mandates, thus inhibiting the ability to accommodate marketing patterns in other countries and to respond to unexpected challenges (such as 9/11). These difficulties were exacerbated over the past few years, as the full funding from the occupancy tax as contained in the state tax code has not been made available in the appropriations process.

It is also worthy of note that about 20% of Texas tourism is tied to the cultural arts in Texas. Arts activity has also been demonstrated to be an essential element of many other aspects of the business complex, particularly when viewed in the broad and proper context of the role of the creative process. Texas currently ranks last among all the states and territories in per capita arts funding. Even a modest increase in support could pay notable dividends over an extended time horizon.

Overall, the Texas tourism promotion endeavors must be viewed as highly successful. The accomplishments could likely be enhanced in the future through the provision of financial resources sufficient to remain competitive and through somewhat more flexibility to develop programs to meet evolving market realities.

2. Economic Development Marketing

As noted above, one of the most significant aspects of successful economic development is a steady flow of leads to pursue. Although the total number of locations around the country has risen markedly in recent years, the opportunities for Texas communities have not expanded accordingly. Site selection consultants and economic development professionals report that the state is often not seriously considered, due to both non-competitive incentives and the fact that Texas is not “top-of-mind” with those who often drive the site selection agenda. The potential inducements that might be offered have been discussed at length earlier in this report. The second issue comes down to one basic item—marketing!

Over the past few years, a number of states have developed extensive campaigns to attract economic growth. Multi-million





dollar efforts have been implemented by Georgia, Michigan, New York, North Carolina, Ohio, Pennsylvania, South Carolina, and Tennessee. Public-private partnerships in other states have also generated successful programs.

Texas has an effective model in its tourism initiative. Leveraging the fiscal resources and expertise of the State to provide an aggressive marketing presence in targeted media, key convention and trade shows, and other outlets would keep Texas on the list of areas to consider on a more consistent basis. If combined with some enhanced incentives in key areas, such a plan could return Texas to its former position as a pre-eminent location for new business activity.

Given the nature of the target group and the synergies with other efforts, a campaign with an annual budget of \$3-\$5 million should be sufficient to materially impact the perception of the state among the relevant constituencies. A recent pilot program with \$100,000 illustrated the viability of the concept and produced a significant increment to lead generation; this effort produced hundreds of leads and at least a dozen legitimate prospects. Further evidence is provided by the successes enjoyed by other states. Such an initiative could be funded through state revenues (a small cost relative to the state budget with an enormous potential payoff) or some type of equitable allocation of local resources. In either case, a statewide marketing effort aimed at generating prospective employers is an essential component of a viable economic development strategy.

3. International Marketing

It is almost trite to say that the future lies in the global economy, but this basic realization must shape significant elements of the quest for competitiveness. With regard to marketing, the need for a degree of international focus spans the areas of (1) tourism, (2) corporate locations, and (3) trade promotion. Texas markets tourism on a global basis, although the primary emphasis is (properly) domestic. Greater flexibility in the use of funds could enhance effectiveness, particularly in European and Asian markets.

In adopting a marketing program, some segment of the resources should be deployed to ensure that international prospects are aware of opportunities in Texas. This process is facilitated by (1) the universal reach of the Internet and (2)





the global coverage of many key publications and trade shows. Nonetheless, specialized efforts are needed, particularly in countries with concentrations of sectoral production well suited to Texas or benefiting from proximity to Mexico. Major corporations routinely engage in global site selection initiatives, and Texas has much to offer with regard to geographic location and accessibility to international destinations for both sourcing inputs and delivering final products.

The remaining key world marketing element is trade promotion. TxED sponsors trade missions to various countries. Much of this activity can be funded privately, as firms obtain direct benefits from expanding the market for their goods and services. State support is required in coordination, promotion, and other activities aimed at providing value to participants. These initiatives should also be expanded to diversify the range of countries with which Texas has substantial volumes of commerce. While companies within the state have some level of trade with more than 200 countries, there is a very high concentration of this activity in North America.

One strategy that has worked well for several states is the creation of foreign offices in key regions of the world. With the exception of Mexico, Texas does not have such a program at present, although a very limited presence was developed in Europe and Asia at one time. Maintaining such offices is relatively expensive compared to other mechanisms and should be evaluated relative to other approaches on a cost-benefit basis. It is worthwhile, however, to provide Texas with a constant and consistent presence in areas where key trading opportunities are available.

A study by The Perryman Group revealed that almost two-thirds of the new jobs created in Texas in the decade following the oil and real estate crises were directly or indirectly tied to expanding international trade and the global economy. Much of this impetus was derived from substantial gains in activity associated with Mexico and the emergence of the North American Free Trade Agreement. While these factors are likely to foster additional growth in the future, the pace will not be as rapid as these relationships mature. When this market reality is combined with an increasingly integrated world, it becomes apparent that Texas





can only reach its full potential through an aggressive global presence.

4. Synopsis

In all aspects of the quest for economic progress, tooting one's own horn has become a vital ingredient in successful strategies. In such a competitive environment, Texas needs a philharmonic.

D. Focused Industrial Recruitment

The final segment of this analysis of “incremental” economic development in Texas shifts the focus from “how” to “what.” While any viable prospects for desirable activity should certainly be vigorously pursued, the industrial recruitment process must be focused. The rationale is simply that resources are limited and must be deployed in a manner to optimize prospects for success. As noted in Section III, the process of identifying appropriate targets involves (1) extensive empirical analysis to determine the resources and linkages which point to probable success and (2) detailed industrial evaluation to access those sectors with sufficient growth potential to merit recruitment. It should be noted that some regions of the state have characteristics more conducive to attracting growth in particular categories than others. Such outcomes, which will be examined in detail in Section VI, reflect nothing more than the diversity of Texas and its various areas. In fact, some industrial targets with limited (but some) aggregate potential were selected because of their “fit” with specific regions of Texas.

In order to be a viable candidate for long-term expansion, a sector must be characterized by both an appropriate match with the structure and resources of Texas and at least moderate prospects for new and expanded facilities. For example, Texas has experienced a relatively strong concentration in the apparel industry for many years and exhibits both labor and transportation factors which are well-suited to such activity. Nonetheless, this sector, because of global wage patterns, is being lost to the US and is migrating to areas such as the Pacific Rim (and, to a lesser extent, Mexico). Thus, it would be inappropriate to devote substantial resources to efforts to attract new apparel manufacturers. Similarly, financial services is projected to enjoy a definitive upward trend as an export sector given increasingly integrated





international capital markets. Expansion is also projected in Texas. Because the sector within the state largely serves internal demand, however, its expansion will mirror that of the overall economy (in much the same manner as retail operations). Consequently, this industry is not included as a target for extensive recruitment efforts. In keeping with contemporary site selection trends, relevant sectors are determined as interrelated clusters of economic activity.

As a result of the comprehensive evaluation process undertaken in this analysis, fifteen target clusters were identified. Each of these is briefly described below.

1. Emerging Biotechnology and Medical Cluster

Texas has a long history of a significant presence in medical and biotechnology fields. Although typically associated with medical breakthroughs, some of the most significant biotechnology research to date has been in agriculture. Genetic engineering and other advances have increased crop and livestock yields and nutritional values for many years. Texas producers have embraced these advances, and Texas A&M University is widely recognized in several relevant research areas.

Texas also has substantial medical centers and facilities in Houston, San Antonio, and Dallas which have been internationally recognized for many years. Additionally, several smaller areas, such as Tyler, Temple, and Lubbock, have highly regarded regional health complexes. Medical schools and research hospitals in the state are at the forefront of key emerging areas of discovery, as is the University of Texas and other educational institutions. The healthcare sector has seen strong expansion over time in Texas and is projected to continue such growth in output and jobs well into the future. Much of this positive outlook is tied to basic demographics; the state has increasing population in the older (retirees) and younger (adolescents and children) age groups, both of which are significant consumers of medical services.

Biotechnology is an emerging high-growth sector. Establishing a major presence in this arena can be as important to future prospects as microelectronics was in the 1990s. The Governor's Council on Science and Biotechnology Development has identified numerous important initiatives in this arena which are crucial to ultimate





success. These include workforce training, research and development funding, ongoing university and medical school research, early-stage capital formation and technology transfer efficiency, investment incentives, increased access to federal funds, and a more significant concentration of pharmaceutical manufacturing (part of the overall cluster) within the state. While Texas only has a modest level of pharmaceutical manufacturing at present, the state has (1) a large presence in basic chemicals, (2) extensive research capability, (3) a suitable workforce, and (4) transportation cost competitiveness. A targeted effort with appropriate incentives should thus provide the opportunity to attract activity in this sector, particularly as part of a unified emphasis on biotechnology and medical services.

2. Emerging Nanotechnology and Materials Cluster

Nanotechnology, which involves operations with extremely small molecular particles, is likely to completely transform many aspects of the economy over the next two decades. It permits revolutionary, lightweight materials which are many times tougher than steel and can have internal processing capability (collectively known as “smart materials”). It permits molecular computing, electronics, and data storage and can fundamentally impact telecommunications, environmental quality, medicine, and security. From a nascent, research-based sector at present, nanotechnology has, according to the National Science Foundation, a trillion-dollar potential within 10 to 15 years. Governments throughout the world are spending billions of dollars per year to support this type of research, and the costs are escalating notably (a five-fold increase since 1997).

Texas has an opportunity to be a significant force in this rapidly emerging sector. The state has numerous cutting-edge companies dedicated to such innovations, recognized research programs at several universities (including one of the global leaders at Rice University), Nobel laureates in the field, and an established electronics industry which provides many of the support services required for sustainability and growth.

Despite these advantages, many areas of the country (and the world) are making a much more concerted effort to establish a nanotechnology cluster. As examples, California, New York, Illinois, Pennsylvania, and New Jersey have ongoing commitments to this endeavor which far exceed





those of Texas. The required ingredients for success are quite similar to those needed in biotechnology, although the less mature status of nanotechnology puts perhaps greater emphasis on incubators, early stage assistance, federal grant funding, and investment incentives. Being on the ground floor of this remarkable innovation and becoming an established and recognized site may well be essential to maintaining a position of rapid economic expansion, much as microelectronics shaped growth patterns in the 1990s.

3. Electronics Cluster

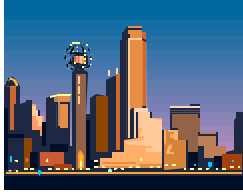
The electronic components sector of the Texas economy saw job growth of 77.9% in the 1990s, compared with gains of 32.7% in aggregate employment and only 10.4% in manufacturing. Given its high wages and high value added, this cluster contributed notably to the overall prosperity of the decade. Semiconductors and other microelectronic devices have endured a substantial cyclical downturn in the past two years, with a combination of excess capacity, sluggish demand, and price competitiveness taking its toll on all major suppliers.

Although Texas has enjoyed an impressive role in electronics dating back to the early days of the transistor, a significant enhancement came with the location of Sematech in Austin in 1987. This consortium of major manufacturers focused on production technology and played a critical role (along with the Microelectronics and Computer Technology Corporation research consortium a few years earlier) in allowing Central Texas to surface as a major global site in this sector.

Texas located several large-scale electronic component plants in the early 1990s, but none since 1996. Given the relatively short life cycle of such facilities in the absence of major upgrades, this pattern does not bode well for the state to remain a significant producer of microelectronic products over an extended period. In fact, Sematech itself has announced some activities in New York and is considering a more extensive presence. Moreover, recent layoff patterns relative to other parts of the world suggest that the state must take decisive steps to retain its prominent position in this important sector.

While technology constantly evolves in this cluster and plants face ongoing challenges of obsolescence, electronic





components will nonetheless continue to be a major growth sector for the foreseeable future. As always, it will be cyclical and subject to periodic market gluts, but within a framework characterized by strong output expansion trends. New and innovative devices and product demand from emerging nations will assure that the sector performs well over time. Microelectronics will soon comprise 25% of the value of an automobile, and smart cards, digital cameras, and additional next-generation products will fuel continued growth.

As a general proposition, the US will be most effective in design and fabrication, with assembly occurring in other countries. Similarly, components with a high direct technology content, such as printed circuit boards, will retain a strong domestic base. Texas has well over 300 electronic components establishments, many of which are dependent on the large manufacturing facilities in and around the Dallas and Austin areas. The maintenance of a strong cluster also is a significant aid in efforts to establish an early foothold in nanotechnology. Success in retaining and expanding microelectronics in Texas will require substantial and aggressive efforts to attract new, more modern plants as well as a committed focus on future federal programs. The Governor recently formed a Technology Working Group to address these issues.

4. Information Services Cluster

The information services cluster incorporates publishing, motion pictures, broadcasting, data processing, telecommunications, software publishing, and similar enterprises. It currently employs about 250,000 Texans in approximately 9,000 facilities. The recent challenges of coping with a deregulated environment have put pressure on some of these industries, while the Internet has opened enormous opportunities in others. Texas is a net exporter in key segments of this cluster, particularly those with relatively high wages and value added.

One of the driving forces in the ongoing evolution of the information cluster is advertising. At present, the delivery mechanism for commercial information is in a state of transition and challenge. Traditional television networks, cable channels, digital satellites, communications devices, and online outlets compete aggressively for the evolving capacity to reach consumers and business customers in an





effective manner. Similarly, data processing and software continue to expand in functionality and market penetration.

This pattern, combined with a strong overall expansionary trend, leads to many opportunities for future growth. Consolidations among leading firms and merging markets also create the possibility of significant locations. Texas has several major firms, a growing film industry, and a notable presence in telecommunications services (one of the dominant employers in the sector). Technology is also spurring new service offerings and corresponding growth possibilities. Despite a recent and temporary cyclical downturn in some segments, this cluster generates revenue prospects for economic development over an extended time horizon.

5. Applied Technology Cluster: Communications and Computing Equipment

The global economic slowdown in the past two years has taken its toll on key sectors which embody substantial technology in their products, such as communications equipment and computers. These sectors have seen substantial layoffs and excess capacity of late, but nonetheless are vital to future prosperity. They were major job and output generators for Texas in the 1990s, and they remain net export sectors for the state, with excellent wage and production characteristics. Taken together, the industries in this cluster include more than 200 establishments in Texas with a combined workforce of more than 40,000 persons.

Computer equipment is projected to experience strong long-term growth as a result of evolving technology, increased use of peripherals, and expanding export demand in Latin America and Asia. The industry will be characterized by extensive innovation and startup companies as well as mergers to absorb those advances into mainstream production. This environment will create substantial location opportunities which Texas can be well positioned to pursue with an aggressive site selection program.

Communications equipment demand will spur strong growth as the domestic and international economies recover, fueled by multiple lines, digital and cellular growth in emerging nations, new technology, fiber optics, network equipment, and broadband applications. Like many other sectors, the US role





will be in the more sophisticated operations; lower end products are essentially commodities. Texas has an excellent concentration of communications equipment and supporting sectors and is a strong candidate for future expansions. Cost parameters are tight in all types of applied technology machinery, however, and locations will be critically affected by incremental incentive programs.

6. Corporate Headquarters Cluster

Although they do not always create large numbers of jobs and the multipliers on state business activity are lower than in many other production sectors, it is highly desirable for Texas to be competitive in attracting major corporate headquarters. The presence of such operations brings prestige and recognition to an area, a group of civic-minded and highly-compensated executives, and frequent opportunities to secure other aspects of firm operations. The recent intense competition for the Boeing headquarters among Illinois (the ultimate winner), Colorado, and Texas is ample evidence of the value attached to such successes.

Texas is the corporate or domestic home to many major companies in such diverse sectors as oil, retailing, communications, electric power, software, airlines, railroads, electronics, computers, and heavy manufacturing. The state also serves as the regional center for numerous other firms, a distinction which brings similar benefits in many arenas. Such operations currently employ more than 250,000 persons in Texas, with average salaries approaching \$80,000 per annum. There are new opportunities created by mergers, globalization, obsolescence, evolving space requirements, and changing corporate philosophies. While proximity to production facilities was once viewed as essential, increasing mobility and outsourcing has opened locations to a broad geographic base. Companies typically seek the availability of extensive amenities, excellent educational programs, global air service, and the ability to accommodate specific space and location requirements (transportation access, suburban campuses, downtown buildings, etc.). Because of the high-profile nature of these decisions, the increasing attention to fiduciary responsibility, and the desirability and benefits to an area of being successful, competition is vigorous and large incentive packages are common. Texas can meet the basic criteria of most firms and should specifically tailor inducements to be highly competitive.





7. Business Services Cluster

While some elements of business services primarily involve local areas, many firms serve markets throughout the world. In these instances, the company becomes a part of the economic base, securing revenues from other parts of the globe which are then spent and invested in Texas. The export segment of business services includes areas such as engineering, architecture, legal services, accounting, management consulting, human resources, telecom call centers performing a number of marketing and support functions, and a variety of administrative and technical processes which are increasingly performed by external firms. Texas is a net exporter of many of these services, and business services industries rank as the largest employer among trade-oriented clusters in Texas (and the US) as well as the top such new job source for the state in the 1990s. Although there is significant variability in this sector, overall compensation is well above statewide averages.

The sheer diversity of business services makes such locations suitable for many parts of the state. Large firms with a highly professional workforce tend to be attracted to large cities, with an ongoing pattern of consolidation creating impressive opportunities. The outsourcing movement generates additional potential, with many functions ranging from photocopying and mailing to human resource management being contracted to external enterprises. Call centers, claims processors, customer service, and similar facilities are often well suited to smaller metropolitan areas, as available facilities and workers can create a very cost-effective environment. Evolving technological and societal patterns will continue to drive strong growth in these sectors, although the location nexus is becoming increasingly global.

Texas can be competitive in virtually all of the core business service functions and has enjoyed considerable success over time. The site selection process in many elements of the business services cluster is driven by building availability, training opportunities, and incentives. The decisions are extremely dependent on cost considerations, and aggressive and focused efforts are necessary for positive outcomes.





8. Tourism Cluster

As noted earlier, tourism (including travel, hospitality, recreation, a portion of food and beverage and retail sales, and other miscellaneous outlays) is a major industry in Texas, and past promotion efforts have been highly successful. Nonetheless, most of the travel in Texas remains in-state in nature, and Texas has more tourism dollars flow out to other regions and countries than come into the state from outside areas. Moreover, the size and diversity of Texas brings a variety of tourism options in many parts of the state, ranging from major sports, the arts, resorts, and theme parks in large urban cities to hunting, fishing, bird-watching, and camping in rural areas. There are more than 5,000 recreational and entertainment facilities in the state, over 300 museums, 3,000 lodging establishments, and 30,000 eating and drinking places. Cooperative state and local efforts help to raise awareness of these myriad options. From a site selection perspective, Texas is often reasonably competitive for major new venues and product offerings.

Texas can benefit from more extensive and innovative efforts to promote tourism. Some industry professionals are concerned that occupancy tax rates are not competitive within the state's major markets (8 of the 13 highest rates in the country are in Texas metropolitan areas), although other costs are comparable. Because of its revenue potential and broad applicability across the regions of the state, tourism and related enterprises can play a key role in long-term development.

9. Distribution, Transportation, and Logistics Cluster

The entire process of moving and distributing goods is a vital force in the global economy. With its extensive highway system, major airports and rail lines, port facilities, and location, Texas has long enjoyed a significant presence in all aspects of logistics. The state has net export potential in wholesale trade and distribution; trucking and warehousing; railroad, water, and air transportation; and freight hauling and other transportation services. Proximity to Mexico, international linkages through ports and airports, and a central location relative to US and foreign markets bode well for Texas having extensive opportunities in this cluster over the next several years.





At present, more than 30,000 establishments in Texas are engaged in some aspect of distribution, including numerous major centers in a wide variety of sectors. These firms have an employee base of over 500,000. Significant concentrations are observed in commercial equipment (especially computers), electronics, industrial machinery, chemicals, and petroleum. These sectors reflect both production patterns in the state and the nature of the broad set of markets which are accessible from Texas. Additionally, the transportation sector employs over 300,000 workers in 14,000 establishments. Distribution ranked fourth and transportation and logistics fifth among major export categories in net job creation during the 1990s.

More efficient inventory and supply chain management systems and emerging technology create opportunities for increasing locations in Texas. Enhanced infrastructure, improved mobility, and expanded multi-modal capabilities are critical elements to success. Incentives and overall costs are also significant. In particular, the treatment of goods-in-transit in Texas relative to other states is a major hindrance to some elements of the logistics industry, particularly warehousing. While geographic location and existing attributes are useful in attracting new activity, focused efforts can pay handsome dividends.

10. Heavy Construction Cluster

The heavy construction cluster consists of heavy construction itself (highways, bridges, water and sewer facilities, power transmission facilities, large-scale industrial building facilities, etc.) as well as numerous supporting production sectors. This latter category includes some types of metal fabrication, construction materials (cement, stone, some wood products, etc.), equipment manufacturing, and other activities which support heavy construction. Most other segments of the construction industry are viewed as serving primarily local needs. This cluster was second only to business services in job creation among export clusters in Texas during the 1990s, with the relative performance in the state far surpassing that of the nation.

About 3,000 Texas firms are involved in heavy construction throughout the world. The state is also a leading producer of lumber, architectural and structural materials, and cement, with some presence in other segments as well. On the whole,





Texas is a substantial net exporter of heavy construction. Future opportunities stem from (1) consolidation and merging of firms in the industry generating substantial new locations, (2) a massive demand for domestic and international infrastructure (particularly in emerging nations), (3) technological advances in both materials and construction processes, and (4) expanded facility requirements brought on by environmental concerns and security issues. While some of this new production will be captured by foreign producers, Texas can benefit notably from focused recruitment.

11. Energy Cluster

Much of the energy sector in Texas has traditionally been focused on oil and gas extraction. In fact, while the major fields in Texas are aging and overall production is gradually declining, oil and gas remains by far the highest rated export sector in Texas in terms of net comparative advantage over other areas. This finding is largely a reflection of rich natural resource endowments. Issues of limited supply are likely to encourage the exploration for domestic energy in the future, and new technology is making enhanced recovery economically feasible. Environmental concerns will also likely increase the demand for natural gas in the US. Although there has been long-term decline in employment in the oil and gas sector in Texas, there are nonetheless numerous instances in which the knowledge base and expertise in the state are useful in a global setting. In fact, over twice as many jobs in Texas are tied to such support activities (in more than 2,500 establishments) than are created by oil and gas drilling itself. Rapid technological advances, substantial skills and technical capabilities, and a more integrated world market suggest that Texas can attract new activity in the emerging components of this historically significant sector. These opportunities will grow over time in line with a sizeable increase in demand for petroleum products in high-growth areas of the developing world. (Texas has some presence in the coal and lignite sector of the cluster, but it is not of sufficient magnitude to merit substantial development resource commitments.)

Several other segments of the energy cluster are also worthy of note. (Because of similar production processes, overlapping ownership, and locational issues, petroleum refining is combined with chemicals and addressed below.) Power generation has spurred substantial investment in the





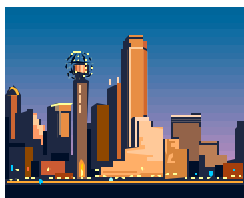
wake of wholesale and retail competition in Texas. Although the nature of the power grid in Texas is such that direct power exports are limited, excess supplies of electricity become a part of the export mix of the state through their role in supporting growth. In fact, power generation has the highest average compensation among export industries within the state. Although deregulation around the country has been stifled to some extent by recent corporate scandals in the energy trading sector and problems in implementation in California and elsewhere, it will ultimately move forward (as it has in other industries). The attractiveness of Texas relative to other states as an energy market will provide opportunities to foster additional large investments in power generation.

A related portion of the energy cluster which is poised for growth despite recent setbacks is energy trading itself. The high-profile failures of Enron and Dynegy do not in any way diminish the fact that responsible arbitrage is a viable and profitable activity that enables markets to function more efficiently. This sector will flourish over time, thus creating the opportunity to generate thousands of jobs. Texas was dominant in this activity before the recent disruptions, but will face both domestic and international competition as the sector evolves in the future.

A final segment of the energy cluster worthy of mention in this context is the somewhat amorphous collection of emerging energy services. Deregulated markets provide the stimulus to bring extensive innovations to enhance or exploit traditional mechanisms. Fuel cell technology will play an increasing role in the efficient use of power, thus creating the ingredients for future expansion. Over the next two decades, nanotechnology may also play a role in energy use as well. On a more current note, wind energy investments are generating economic benefits to areas around the country, including Texas. This trend is driven by both deregulation and the increasing demand for electric power with appropriate environmental characteristics. Future development is highly dependent on investment returns, transmission capability, and consumer preferences. Texas has an opportunity to facilitate extensive investment in rural segments of the state while encouraging the development of substantial supporting sectors.

In summary, energy and related production were dominant in the Texas export base for most of a century. While those





days have given way to the requirements and realities of a technological and information age, the energy cluster continues to offer viable mechanisms to achieve economic growth in many areas of the state.

12. Petroleum Refining and Chemical Cluster

Petroleum refining and related chemical production (including petrochemicals) have been significant sources of investment and employment in Texas for decades. Much of this activity is concentrated along the Gulf Coast, although inland facilities are located in other parts of the state. The cluster enjoyed a multi-billion dollar expansion in the early 1990s, but presently faces sluggish demand and some notable environmental remediation issues. The relevant industrial categories are significant net export sectors for the state, employing well over 150,000 Texans in more than 2,000 establishments. These industries rank among the top five clusters in average compensation per worker. Major categories include refineries, petrochemicals, general organic chemicals, plastics materials, and chemical preparations. Additionally, pharmaceuticals offer opportunities for the future as new scientific discoveries are translated into innovative products, and Texas seeks a major presence in biotechnology.

The demand for much of the US output in this cluster is determined by expanding foreign markets. Approximately one-third of all domestic output is sold abroad, with long-term expansion into South America offering strong promise. Growth will generally track US gross product in several segments, as much of the core industry consists of commodities widely integrated into other value-added sectors. Over time, this pattern will be augmented by expanded needs in emerging nations. The pharmaceutical segment will increase in value more rapidly than those aspects of the sector that are primarily undifferentiated commodities. While the current environmental issues put constraints on profitability, they will also accelerate the next round of capital investment. This outcome poses both opportunities and challenges. Clearly, by virtue of its installed base and supporting infrastructure and supplier networks, Texas will be a contender for new plants and major renovations. On the other hand, industry executives consistently report that (1) the state is not competitive with other domestic sites with regard to cost, regulation, and incentive factors; and (2) there is intense competition from other production regions, especially in Asia.





13. Transportation Equipment Cluster

Texas has historically had some presence in the automobile sector, and San Antonio appears to have been selected as the site for a major Toyota facility. A few years ago, General Motors made a substantial new investment in its Arlington plant. Similarly, Texas is a dominant player in defense aviation, an industry which has seen substantial overall declines during the past decade in response to the “peace dividend.” Nonetheless, aircraft-related manufacturing has opportunities to expand in the future as a result of (1) the Lockheed-Martin facility in Fort Worth being awarded the Joint Strike Fighter contract that will likely extend for decades into the future, (2) increased success and potential utility of the V-22 Tilt-Rotor aircraft, which is assembled in Amarillo, and (3) the events of September 11, 2001 and the associated renewed impetus to military programs. (Given the current status of the civilian aircraft and airline sectors, no opportunities are anticipated in that arena over the next several years.)

When these large-scale facilities are combined with modest activity in rail cars and shipbuilding, transportation equipment becomes a significant employer within the state, with over 800 establishments and 75,000 workers. It also offers future opportunities in that (1) the probable expansion of aircraft production in the state will generate new supply chain requirements, and (2) the concentration of original equipment manufacturers (OEMs) for the automobile industry in Mexico provides an impetus for manufacturing in key Texas markets. Although the domestic automobile companies may experience some realignment in the next few years, foreign firms are increasing their facility locations in the US. Many collateral suppliers gain other cost advantages by being proximate to facilities. Moreover, new technology is spurring next generation plants and suppliers, thus further enhancing the prospects for Texas.

The competition for new automobile plants is intensive. Successful sites routinely provide several hundred million dollars in incentives. The manufacturers are very sophisticated as well. Negotiations are complex, and flexibility is essential. If Texas is to attract these large-scale opportunities in sufficient numbers, it must (1) adopt aggressive, intelligent, and consistent strategies and (2)





communicate them effectively across the site selection community.

14. Production Support Manufacturing Cluster

The production support manufacturing cluster consists of some elements of metal fabrication and several categories of industrial machinery. It could perhaps be called an “Old Economy” sector, as it represents many traditional manufacturing processes. Nonetheless, these goods are required to support and sustain all aspects of the economy, with evolving technology and the opening of new markets generating some expansion opportunities. The need for environmental equipment also yields expanded prospects in some of these areas.

The segments of production support which are present as significant sectors in Texas include, among others, various metal forgings and shapings; boilers, tanks, and containers; machine shops; coating and painting; metal valves and pipes; construction machinery; oil field machinery; industrial machinery (paper, textile, food, semiconductors, etc.); commercial machinery; heating, air conditioning, and refrigeration equipment; metal working machinery; pumps and compressors; materials handling apparatus; and welding apparatus. These categories represent about 200,000 jobs in more than 5,000 facilities, and Texas is a net exporter of goods in this cluster.

Although it is not possible to completely generalize about these diverse sectors, a few overall observations can be made. On the whole, their growth tends to track aggregate patterns in global and domestic business activity. Despite their mature nature, they are undergoing technological changes which necessitate retooling and new facilities. Most sectors are experiencing increasing output over time, but stable to declining employment. Plant locations are often characterized by high levels of capital intensity and sophisticated instrumentation. Most product categories are seeing rising production in foreign markets. Skilled workers are critical in attracting new and expanded facilities, as well as retaining existing output in a fluid environment. Numerous opportunities are available each year, and this cluster has the potential to significantly and productively impact several regions of Texas.





15. Agricultural and Food Cluster

Agriculture has been a vital part of the Texas economy since its earliest settlement. In recent years, however, farm employment has been in a steady decline. Viewed realistically, the state is limited in its competitiveness for future production to livestock (primarily cattle and calves), dairy, citrus in the Lower Rio Grande Valley, and a few selected specialty items. The grape and winemaking industry is also enjoying impressive growth. Some traditional sectors (such as cotton and several types of vegetables) are experiencing difficulties in the global environment, yet agricultural services have expanded significantly. Moreover, Texas is a net exporter in some categories of processed food (such as meat, dairy, and fruits and vegetables), the state could gain billions of dollars in production by capturing a larger percentage of the value-added on existing critical agricultural exports. Approximately 100,000 workers in more than 2,000 plants are supported by agricultural services and food processing.

Exports to Asia are a major factor driving expansion in food processing. The cluster is mature in many respects, and consolidations are common. Nonetheless, evolving consumer demand for different types of products and delivery mechanisms generate prospects for new facilities. Texas has several advantages in terms of proximity to raw materials, location, and transportation access. Opportunities are somewhat limited, however, and Texas must support local development efforts in an effective manner. Agricultural processing in the US has to innovate to survive and progress; current biotechnology advances are yielding opportunities which could well bring a renaissance in the future. Support for research and development, incentives to impact bottom-line costs, and effective job training efforts can stimulate locations in Texas which may be of substantial benefit to many small and medium-sized communities.

16. Synopsis

Economic development resources are scarce and must be allocated efficiently. While the clusters described above are not the only areas of potential growth, they represent sectors which offer the best promise of success. When developing marketing strategies, attending trade shows, planning international trade missions, or visiting key corporations, it is helpful to focus on the industries offering genuine





opportunities. The relative strengths and weaknesses of various regions will shape more specific initiatives, but an overall positive view of Texas as a competitive, business-friendly environment is an essential part of the process. Regional issues will be discussed briefly in Section VI, and a profile of each major region of the state is given in Appendix I.

Target Industry Clusters for
Focused Recruitment In Texas*

Emerging Biotechnology and Medical Cluster
Emerging Nanotechnology and Materials Cluster
Electronics Cluster
Information Services Cluster
Applied Technology Cluster: Communications and Computer Equipment
Corporate Headquarters Cluster
Business Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Transportation Equipment Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

*Clusters were selected on the basis of industry linkages and cluster analysis, occupational workforce requirements and availability, support requirements, and an evaluation of future industrial prospects.

As a final note regarding focused recruitment, it seems likely that many of these clusters will merge in the future. Scientific discoveries are driving nanotechnology, biotechnology, smart materials, electronics, communications, and alternate energy in similar directions. These advances will shape agricultural applications, energy utilization, and equipment and machinery needs, and they will redefine the way business services are delivered. It is, thus, imperative that Texas be a significant player in these new and innovative sectors to secure a viable role in the global economy on an ongoing basis.

E. Incremental Economic Development: A Perspective

As noted earlier, much of economic development policy is inseparable from the fundamental functions of government. It revolves around making the state a desirable place to be, with excellent educational opportunities at all levels, infrastructure to encourage and accommodate growth, a fair and equitable tax system, appropriate environmental standards, a balanced judicial system to resolve legitimate disputes, understandable and common-sense based regulatory mechanisms, and a predictable framework to permit accurate assessment of and





compensation for risks. The point is simply to create a business and quality-of-life climate that is conducive to prosperity and which makes Texas a desirable place to live, work, invest, and create jobs and economic activity.

In the contemporary context, such efforts are essential, but also are not enough. In the language of mathematics, they are necessary but not sufficient conditions. Location decisions which vitally impact long-range expansion and fiscal soundness are made in a market framework driven by considerations of costs and profitability. Incentives are a fact of life in that marketplace. Effective financial inducements, precisely targeted job training, and enhanced capital access are part of the supply and demand mix in site selection competition. As with any market where participants have differentiated offerings, advertising and promotion are part of the process. When public or private resources are invested in future progress, they should be directed in a manner which maximizes returns. If Texas is to win with some degree of consistency, Texas must first be in the game. Fundamental policy will get the ball inside the 20-yard line; incremental policy takes it over the goal line.

VI. A Regional Development Perspective

Discussions of “the” Texas economy, while commonplace, are somewhat mislabeled. Texas is, in fact, many economies. Some are defined by climate, some by natural resources, some by location, some by events a world away, and some by historical accident. The vast expanse of the Lone Star State includes deserts, mountains, beaches, lakes, parks, and plains. It has areas which support massive livestock herds, those which sustain arid crops, and those with the lush climate and rich soil necessary for citrus production. Texas has densely populated cities, sprawling suburbs, and sparsely settled rural regions. It has high-tech centers, traditional manufacturing complexes, major research facilities, and excellent universities. It has an enormous collection of tourism venues, rich oil and gas fields, and an extended international border. It boasts major corporate headquarters and hundreds of thousands of small, independent businesses.

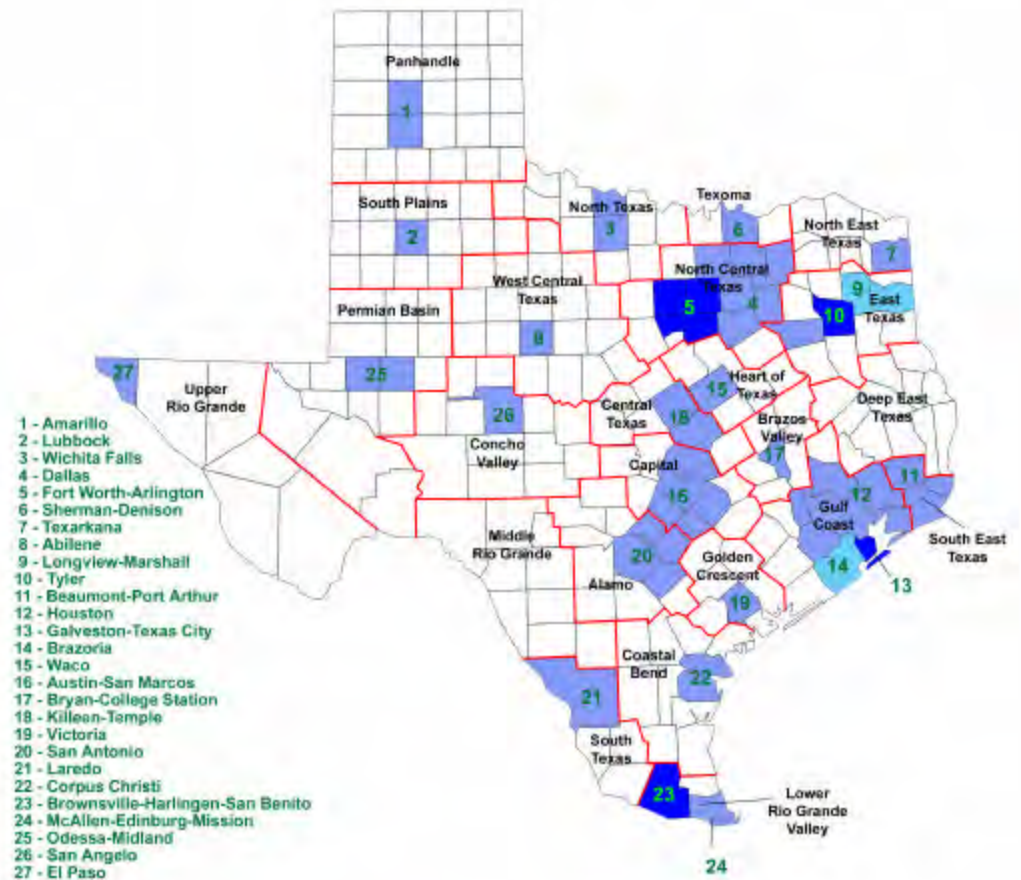
Such a cornucopia of economic assets clearly brings differential prospects, and a “one size fits all” strategy is unlikely to be effective. This fact is clearly reflected in the





performance of various regions over the past decade. For purposes of analysis, it is useful to review outcomes in terms of the 24 planning regions (also known as Council of Governments regions or COGs) within the state.

Planning Regions and Metropolitan Areas in Texas

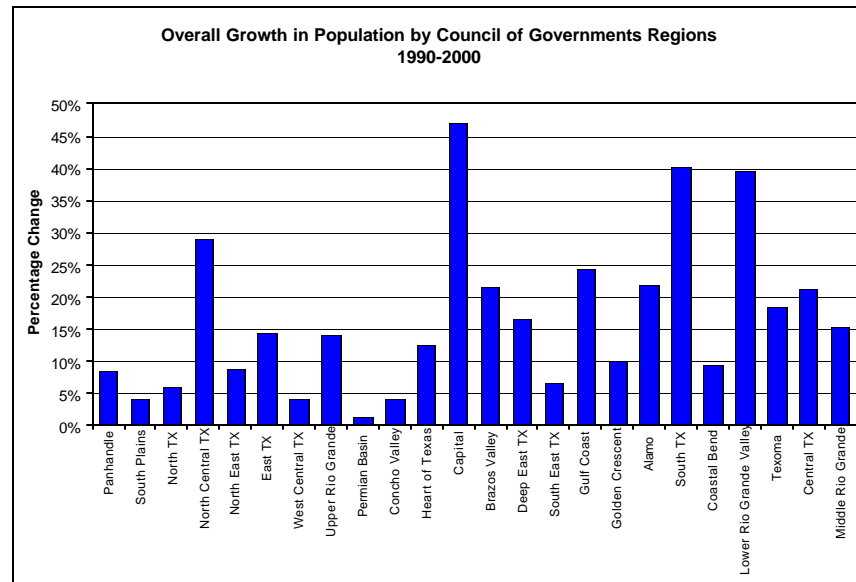


Population expansion ranged from about 50% in the Capital COG Region (Austin area) to less than 5% in the Permian Basin COG Region (Odessa-Midland area), Concho Valley COG Region (San Angelo area), West Central Texas COG Region (Abilene area), and South Plains COG Region (Lubbock area). The South Texas COG Region (Laredo area) and Lower Rio Grande Valley COG Region (McAllen-Edinburg-Mission and Brownsville-Harlingen areas) saw expansion around 40%, and the large population centers of the North East Texas COG Region (Dallas-Fort Worth area), Gulf Coast COG Region (Houston area), and Alamo COG Region (San Antonio area) experienced growth in the 20%-30% range. Such wide variations have important implications



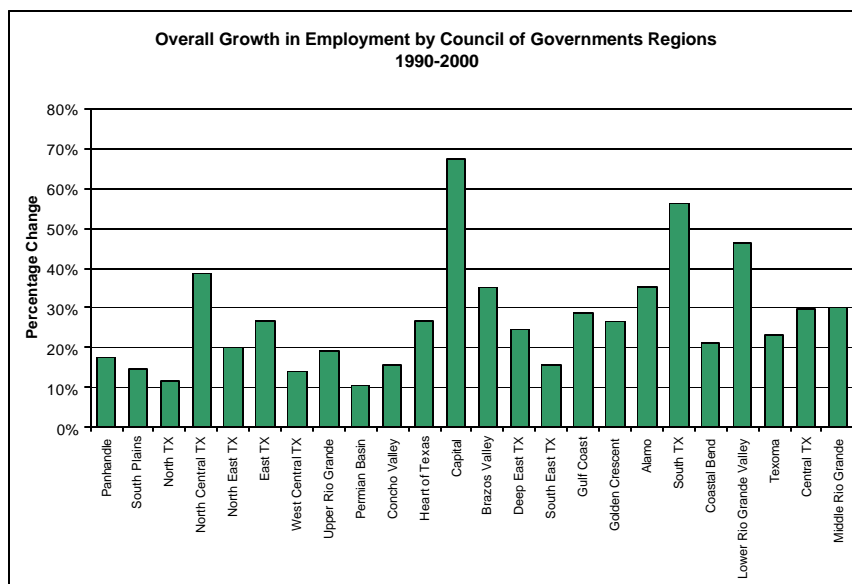
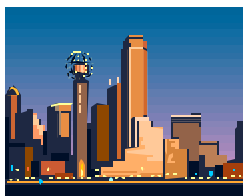


for infrastructure requirements, workforce availability, and other factors which support economic development and sustain prosperity.

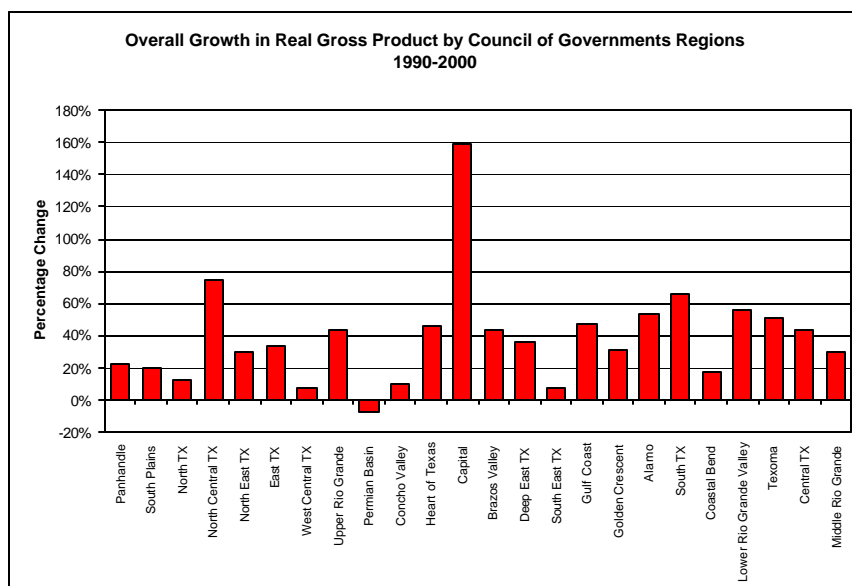


Similar disparities can be found in employment and output patterns. The Capital Region experienced job increases of about 70%, while several smaller markets with largely traditional economic bases grew by only 10%-20%. High rates of expansion were also observed in the South Texas and Lower Rio Grande Valley regions, with strong performance being observed in the North Central Texas, Brazos Valley (Bryan-College Station), and Alamo regions. These performance levels are indicators of (1) the high-tech, high value-added nature of the economic complex in the 1990s, and (2) the substantial benefits associated with the North American Free Trade Agreement and the resulting emphasis on activity related to exports.





The pattern with regard to gross area product is similar, but more exaggerated. The Capital Region exhibited a rate of increase of about 160%. This pace represents more than twice that of any other planning region, and the disparity in some industrial categories is striking. This performance is indicative of the sophisticated local production and service complex which, despite a recent cyclical downturn, bodes well for its future. North Central Texas, which was ranked fourth in employment growth, was second in output increases at approximately 75%. This area is larger and more diverse than the Capital area, and also benefited from its technology-based and high value-added sectors.





These differences in locations, economic characteristics, existing product clusters, workforce, accessibility, and many other factors clearly define the most probable avenues for success in attracting and retaining business accounts. It would be foolish to expend resources in seeking sectors which are not well suited to an area, and the target sectors must be appropriately limited. The industry clusters identified in each planning region within the present analysis are summarized below. Profiles of each individual area are provided in Appendix I to this report.

Summary of Target Industry Clusters by Planning Region													
	Emerging Biotechnology & Medical	Emerging Nanotechnology & Materials	Electronics	Information Services	Applied Technology	Corporate Headquarters	Business Services	Tourism	Distribution, Transportation, & Logistics	Heavy Construction	Energy	Petroleum Refining & Chemical Production	Transportation Equipment
Panhandle				X				X	X	X	X		X
South Plains	X			X				X	X	X	X		X
North TX			X	X				X	X	X	X		X
North Central TX	X	X	X	X	X	X	X	X	X		X		X
North East TX				X				X	X	X	X		X
East TX	X			X				X	X	X	X	X	X
West Central TX				X				X	X	X	X		X
Upper Rio Grande			X	X			X	X	X		X	X	
Permian Basin				X				X	X	X	X	X	X
Concho Valley	X			X				X		X	X		X
Heart of Texas				X				X	X	X			X
Capital	X	X	X	X	X	X	X	X	X				X
Brazos Valley	X			X				X		X	X		X
Deep East TX								X	X	X	X		X
South East TX				X				X	X	X	X	X	X
Gulf Coast	X	X		X	X	X	X	X	X	X	X	X	X
Golden Crescent				X				X	X	X	X	X	X
Alamo	X			X		X	X	X	X	X	X		X
South TX				X				X	X	X	X		X
Coastal Bend	X			X				X	X	X	X	X	X
Lower Rio Grande Valley	X			X				X	X	X	X		X
Texoma			X					X	X	X	X	X	X
Central TX	X			X				X	X	X		X	X
Middle Rio Grande				X				X	X		X		X

*Clusters were selected on the basis of industry linkages and cluster analysis, occupational workforce requirements and availability, support requirements, and an evaluation of future industrial prospects.





It is useful to again emphasize that focused industry recruitment is a strategy to allocate resources; it in no way suggests that other opportunities should be precluded. Furthermore, selecting optimal industries for an area is an inherently dynamic process that needs to be periodically examined. New local characteristics, emerging technologies, changing market factors, increasing global integration, and myriad other aspects of a complex and diverse economy both open additional possibilities and diminish the efficiency of certain prospects. Such issues require ongoing investigation and review to assure proper commitment of resources on a continuing basis.

Finally, the target cluster analysis provided in this document is not a substitute for local endeavors. While a rigorous and comprehensive approach was employed, individual communities and regions must examine specific factors and, in many instances, even increase the range of prospects within individual clusters. This requirement is particularly relevant for relatively disadvantaged areas such as inner cities, the border, and many parts of rural Texas. These communities frequently face lagging educational advancement, inadequate healthcare access, aging infrastructure, low wages and income levels, high unemployment, and a declining industrial base. Quite often, conditions vary notably across areas (even in a generally healthy economic region) such as the small urban center in a rural area or the sub urban counties surrounding an inner city. The Office of Rural and Community Affairs (ORCA) was recently established to focus on rejuvenation in some of these territories, and Strategic Investment Areas, Community Development Block Grants, Enterprise Zones, and similar designations help to direct resources and incentives to places enduring economic distress. Community leaders may often find programs of this nature to be an effective complement to regional efforts.

In some circumstances, regional development strategies are superior to purely local ones, and the COG areas are remarkably well defined and institutionally suited to this purpose. When thoughtfully constructed, regional plans and programs bring notable benefits to local taxing entities and groups. Simply stated, while an analysis such as the one presented in this report is useful, it is not a substitute for real-time, real-world, locally-driven initiatives.





VII. Recommendations for Achieving Long-Term Economic Development and Sustainable Prosperity in Texas

Based on the analysis described above and the additional research surrounding this project, a series of recommendations and strategies is presently offered.

A. Attitude Adjustment!

Perhaps the most important factors noted in the course of this investigation were the prevailing sentiments that (1) Texas has no reason to be actively involved in economic development, and (2) the State government should not commit extensive effort or fiscal resources to such purposes. There are certainly reasonable historical perspectives that could lead to the conclusion, but they are not applicable in the modern framework for a variety of reasons. Texas was, during the oil boom of the 1970s and again in the early 1990s, a leading state in securing new and expanded economic activity. In recent years, however, the state has fallen behind in a variety of objective measures largely as a result of more aggressive initiatives in other states. Business is more mobile, competition is more global, and the locations process is more sophisticated. Much as changing technology and mobility have led to modifications in myriad areas of meeting public needs, similar adjustments are required in economic development.

On a more philosophical level, Texas has a long-standing Populist tradition with a general adherence to the concept of limited government. This basic framework shapes much of public policy within the state, and well it should. It must be recognized, however, that limited government does not mean no government at all, especially in cases where the public sector is the only effective means to achieve socially beneficial aims. In fact, transportation, municipal services, education, and many other functions which promote economic well-being (among other things) are provided or subsidized by government because of their role as public goods which cannot be efficiently provided by private interests.

Economic development as it operates today can be and properly should be viewed in precisely this manner. Perhaps the best and most straightforward way to conceptualize this phenomenon is as a market for economic development





opportunities, with states and communities (as representatives of their citizenry) as demanders (buyers) and firms locating in responding facilities as suppliers (sellers). Because the opportunities are nowhere near sufficient to satisfy the desires of all of the areas in the country (much less the world), it becomes a “sellers’ market.” Areas must induce firms to locate, and, like any rational seller, those offering substantial new projects will be driven by the best prospects for profit.

Because many production inputs are mobile, many cost factors tend to equalize across potential sites. The residual costs components consist of (1) natural disparities inherent in the relevant areas and (2) inducements designed to impact relative attractiveness. In any given situation, the combination of these two factors yields the optimal outcome for the supplier. Since Texas does not consistently provide the low cost site and certainly not by a margin significant enough to overcome inducements from other areas, incentives become a necessary element of being an effective market participant. Similarly, the fact that many of the variable costs differentials adverse to Texas are related to fiscal matters (such as a disproportionate tax burden on capital-intensive facilities) mandates public involvement. A related factor surfaces when other regions provide specific types of incentives tailored to the individual project (such as specialized job training or “deal closing” assistance). Such mechanisms then become part of the information base and “price” (overall set of available incentives) in the marketplace. This practice requires other buyers to respond with comparable or more innovative approaches. Because buyers are seeking sellers with differentiated terms, effective marketing is also essential.

Finally, it must be recognized that this market clearly illustrates the notion of economic development as a public good. New activity clearly brings “positive externalities,” or benefits which extend beyond the immediate plant location. Moreover, it is neither practically nor economically feasible for those receiving direct economic benefits (such as potential employees or suppliers) to directly organize the incentives required in the competitive process (just as individuals cannot realistically organize to build public roads). In such a context, it is a proper role of government—even limited government—to manage the process. On the other hand, if the requisite costs exceed the overall benefits to the private and corporate citizens of the state as a group, then the public sector should





not expend the resources. In such instances, the price is too high, and the “purchase” should be foregone. While this characterization is somewhat stylized, it does effectively illustrate the proper perspective for economic development. Simply stated, inducements should be offered to the extent, but only to the extent, that the benefits to the state economy (excluding the profits to the firm making the investment on a risk-return basis) exceed the costs.

This framework helps to define some key aspects of the “attitude adjustment” and derivative policy initiatives which are required. First, the state has struggled over the past few legislative sessions with the seeming conflict between a recognition of the need to be competitive in this arena and the desire to adhere to a limited government philosophy (and to balance the State budget without a major tax increase). This dilemma has been resolved by enacting incentive measures, but doing so in a limited manner both in terms of magnitude and ease of access. A research and development tax credit was created, but on a very small scale that is not competitive with the programs in other states which were previously discussed. Investment and job credits were established, but only at modest levels in Strategic Investment Areas. A school property tax abatement program was implemented, but with such complexity and uncertainty that it is difficult to access. Several other provisions are available, but with only minimal appropriations and no marketing. Viewed through the lens of a market for economic development, it is obvious that such an approach is unlikely to be effective. Inducements that do not frequently and materially impact the process of choosing the best “buyer” bring only marginal benefits (by changing relative attractiveness in selected industries). To be truly a consistent factor in determining outcomes, economic development strategies must, at a minimum, “meet the market.”

Second, this view helps to frame the fiscal setting in which programs should be assessed. The typical analysis of revenue impacts conducted within the state, whether static or dynamic, treats the revenue outlays as a dead weight loss to the State budget. If inducements are properly structured and implemented, the resources are only expended if new activity is forthcoming. Thus, the “but for” world involves no outlays, but also no net new associated economic activity. To view the situation otherwise is to disregard the realities of the business environment. Nothing is less meaningful than an incentive which is never used, yet lack of use is normally the only way





to avoid a negative fiscal assessment (which materially dampens or even eliminates prospects for passage in a tight budgetary cycle). To make matters worse, the lack of use is then frequently cited as a rationale to claim that incentives are not working and should be eliminated. In the meantime, major projects locate in other states. This vicious circle must be broken.

Third, the market construct properly establishes the framework for discussion of fiscal parameters. The legislative debate on economic development initiatives often revolves around costs (which is properly only one of multiple criteria) and the apparent need to find a specific source of revenues to offset any shortfalls. A substantial part of this issue can be addressed by conducting the fiscal assessment of such programs in the manner described above. As to the remainder, the vast majority of economic incentives in states around the country are simply funded by an appropriation from general revenues. In other words, long-term growth is treated as a public good worthy of high funding priority. Texas, like every other state, must make difficult choices among myriad important and competing needs. Economic development brings significant contributions and, through promoting sustainable prosperity, contributes markedly to fiscal well-being over an extended time horizon more than perhaps any other category of activity.

In the same vein, government is not an isolated system; it is a part of the overall social complex. To treat it otherwise is the very antithesis of Populism and a limited government philosophy. Government is a means, not an end. Thus, the overall benefits must, as noted earlier, be evaluated over the whole economy rather than just short-term fiscal effects (just as the long-term social benefits of highways and education provide the basis for public funding). This concept, which is both traditional and enlightened, is the very essence of the rationale for an aggressive (though limited) role of government in ensuring a steady stream of economic development.

B. Simplify! Simplify! Simplify!

A common theme in discussions with economic development professionals, corporate decision-makers in multiple contexts, and representatives from national trade associations was the relative complexity of regulatory requirements and incentive programs in Texas. This fact was verified by independent





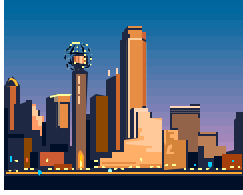
review during the course of this investigation. Many of the implementation rules for regulations related to environmental guidelines, permitting, taxation and other parameters are difficult to interpret and subject to unpredictable outcomes. This situation is frequently exacerbated by abrupt changes in enforcement policy in the middle of planning processes (often prompting legal disputes between companies and regulators and always reducing predictability).

Economic development initiatives are also cumbersome to access, perhaps reflecting the basic view (discussed above) that such programs are net detractions from the State revenue system with no material offsetting benefits. As examples, the process of approving an Enterprise Zone project is extremely repetitious and cumbersome, and the administrative structure of Smart Jobs was one of the inherent problems that precipitated its demise. Such conditions are often influenced by both the agencies charged with overseeing various initiatives and the private consultants who are paid by clients to wade through the process. If left unfettered, a counterproductive and unintended market for complexity develops.

This complexity often results in an inability to assure prospective employers in the critical negotiation stages of their eligibility to obtain location incentives. The failure to illustrate the overall costs and benefits associated with choosing Texas adds uncertainty (and, hence, risk) to the process. When coupled with an overall lack of competitiveness in the variety and magnitude of incentives, this situation exacerbates and reinforces other difficulties. This lack of flexibility and quantifiability is in sharp contrast to competing states and even most local areas in Texas, where definitive packages can be rapidly structured.

While Texas prides itself on being “business friendly,” this perception is not shared by site selection consultants and economic development decision-makers. In particular, the notion that incentives represent efforts to raid the State Treasury rather than opportunities to prime the pump through investing in future growth must be dislodged. While it is beyond the scope of this report to evaluate all aspects of State regulations, significant efforts should be devoted to streamlining business requirements and bringing more certainty to economic development initiatives. As discussed earlier, many competing states have eliminated thousands of





regulations, and their inducement packages are often simple and easy to access. One approach which works well in both arenas is to base compliance with regulations or eligibility for programs on outcomes rather than process. This framework assures that the desired results are achieved, but without an undue bureaucratic burden. This possibility was discussed at length in the prior analysis of job training programs, but can be implemented in numerous contexts. The issue is a serious impediment to future growth; Texas is losing to its competition, and government regulations are reducing efficiency and draining fiscal resources that could be better deployed elsewhere. Keep it simple!

C. Back to Basics!

As discussed at length in this report, many of the basic functions of government establish the foundations on which a viable economic development program is based. While it would take an even more ambitious effort to provide a highly detailed account in each of the categories, some general themes for future policy directions emerge. These topics have been discussed at length earlier; thus, only summary recommendations are given at this point.

1. Education

Texas must meet the challenges of a rapidly growing and demographically diverse population. Performance levels must be enhanced, dropout rates reduced, and college enrollments increased. The Texas Education Agency, Texas Higher Education Coordinating Board, Texas Workforce Commission, and other entities are developing concrete plans to improve educational opportunities throughout the state. Texas presently lags other large states in most measures of educational attainment, which, is a distinct competitive disadvantage. A young and expanding population can be a marvelous resource for future development and a notable contribution to the tax base for generations, whereas an uneducated citizenry limits economic potential and leads to a strain on social service networks. Texas must enhance and adequately fund the ongoing initiatives to “close the gaps” in education and promote improvements in quality at all levels.





2. Environment

Texas has several urban centers at or near nonattainment status with regard to Clean Air Act standards. Compliance plans have been established, but the funding mechanism has been thwarted in a legal challenge. The state also faces other environmental concerns, including air quality and water quality and quantity issues. Compliance with applicable regulations is required to avoid significant penalties (including potential loss of federal highway funding), and ecological conditions in an area can materially impact its desirability and feasibility as a site for economic growth (particularly in certain technology sectors). The state must adequately support efforts to meet federal mandates while promoting environmental quality within a predictable and common-sense regulatory framework.

3. Tax Policy

Tax policy in Texas suffers from (1) significant issues with regard to the adequacy and fairness of public school funding, (2) disproportionate burdens on capital-intensive industries which constrain economic development, (3) a revenue base that does not expand in line with overall economic growth and fiscal requirements, and (4) relative complexity in administration. Several alternatives were previously explored in detail. Overhauling the tax system is clearly a massive undertaking fraught with political and economic landmines. Nevertheless, the state should begin moving at least incrementally toward a more proper system to meet long-term requirements in an effective manner. This process is likely to initially emanate from school finance, but its relative share of overall state and local spending is sufficiently large to merit comprehensive review of the entire system.

4. Transportation

Texas needs to ensure adequate transportation infrastructure to support future growth. The highway system is not keeping pace, and other modes are worthy of consideration. The state has recently established toll equity funding mechanisms and a mobility fund (as yet unfunded) to accelerate construction. While fiscal priorities must obviously be considered, efforts to enhance mobility are critical to future competitiveness and the ability to recognize trade opportunities throughout the state. The Trans Texas Corridor concept and similar initiatives are potential avenues to optimize the use of financial resources





for this purpose and to encourage effective public-private partnerships to accelerate development.

5. Communications

Communications is a cornerstone of social and economic progress. It has shaped the path of civilization for several millennia and will do so in the future. The availability of state-of-the-art capability to support technological progress is essential for the sustainable expansion of business activities in Texas. Broadband accessibility at affordable rates can redefine the viability of rural and border regions in Texas in terms of education, healthcare, feasible target clusters, and many other factors. As noted earlier, specific revenue sources are potentially available for such infrastructure, although not without controversy. In any case, communications capabilities that meet or exceed those of other large states represent a key element of this fundamental aspect of economic development.

6. Electric Power

Texas has initiated an ambitious electric competition effort, which, despite the expected glitches associated with transition, is a model for other areas. The state also has a well-defined power grid covering about 85% of total usage and a surplus of power to sustain growth. Maintaining this system and adhering to a consistent set of reasonable and straightforward guidelines can be a major source of advantage to Texas in recruiting electricity-intensive industries. Ensuring adequate returns and predictability in the regulated “wires” (transmission and distribution) segment will further assure that sufficient infrastructure to transport power is maintained.

7. Risk Management

A prevailing theme in the research generated with this project is the importance of minimizing risk, reducing uncertainty, and improving predictability of economic outcomes. This topic has garnered significant attention in the wake of the 9/11 attacks. Obviously, much of this arena lies beyond the purview of government, and quite often, excessive public-sector involvement can do more harm than good. Nonetheless, there are ways to enhance the overall environment within the





state in which firms engage in already risky competitive activities.

Greater flexibility and fewer mandates can reduce health and property/casualty costs and enhance consumer choice. Eliminating any forms of rate discrimination or disparity that are not justified by actuarial experience can increase accessibility. Appropriate liability limits on mold and other emerging risks can encourage expanded availability of coverage. Judicial reforms in the area of malpractice can reduce healthcare costs, and similar reforms in other areas can positively affect affordability and risk management. Texas needs to take appropriate steps to ensure a framework conducive to investment and job creation and to encourage overall public health; at the same time, the state must avoid the temptation to employ rate caps and other artificial and ultimately counterproductive solutions which could undermine the basic structure within which business activity occurs.

8. Synopsis

Clearly the proper climate for encouraging growth is an absolute necessity in promoting ongoing prosperity. Despite the associated fiscal challenge, Texas must achieve these objectives on multiple fronts. Technology, common sense, and public-private initiatives offer opportunities for more effectively achieving many of these “fundamental” development objectives.

D. Show Me The Money!

No matter how distasteful they may be in principle, monetary incentives are a fact of life in modern economic development. Viewed in the framework established above, they are an integral part of the “market” for new and expanded economic engines. There is certainly nothing new about economic incentives, and they are not without long-standing historical precedent in the Lone Star State. The first settlers who migrated to Texas from Mexico (the legendary “Texicans”) received free land and tax incentives as an inducement to inhabit this rugged territory. Based on the investigation underlying this report, a number of initiatives appear to be definitively justified, viable mechanisms to improve the state’s competitive position in the market for quality locations, expansions, and retentions. These areas are briefly discussed below.





1. **Create a Strike Force Capability or “Deal-Closing” Fund.** The designation of a discretionary pool of money to secure key incentives on an expedited basis for major projects represents one of the most significant opportunities currently facing Texas. Providing the Governor (possibly with input from a few others) the ability to deploy such revenues as part of an overall state and local government inducement strategy can be (and often is) the difference between success and failure. The Governor, as the primary spokesperson for the State, is a vital part of modern economic development and needs to have the flexibility to make things happen.
2. **Increase Existing Research and Development Incentive Programs.** Texas should raise the research and development tax credit to a higher percentage in order to be more competitive with other states in this critical area for future growth. The state should also allow the overhead allocation from university research grants to be used for the intended purpose, rather than being transferred to general revenue.
3. **Expand and Simplify the Investment Tax Credit and Jobs Tax Credit Programs.** Texas should (1) increase the level of credit associated with these programs to a range more in line with other states (2) eliminate provisions which make it difficult to access, and (3) extend the coverage to the entire state, rather than limiting it to Strategic Investment Areas (SIAs). (The level of the credits could be somewhat higher in the SIAs in order to further encourage development in these regions.) The Investment Tax Credit is particularly important in order to offset the built-in penalties for capital-intensive firms in the current fiscal structure.
4. **Simplify House Bill (HB) 1200.** This measure is a major advance in development policy because it directly affects the disproportionate property tax liability of capital-intensive firms. As long as the property tax is the primary mechanism to fund public education, a measure such as HB1200 is essential for competitiveness. The process for using the program needs to be simplified, made more predictable, and implemented in a way that does not involve undue risks to the recipients or participating school districts. Such uncertainty can dilute and in some cases





potentially eliminate the advantage to Texas of having this initiative.

5. **Maintain and Strengthen the Economic Development Sales Tax.** This program is the major competitive mechanism currently in place and is key to effective efforts by hundred of communities. Some inappropriate uses have occurred and need to be corrected. Training and education of those involved can be helpful in this respect. On the other hand, the permitted uses should be extended in areas which are clearly related to development and job creation.
6. **Develop a More Equitable and Competitive Taxation System for Inventories.** With continuing reliance on the property tax to fund public schools, a disproportionate burden falls on goods-in-transit relative to other states and leads to direct, quantifiable losses in business activity. Efforts to address this issue (while being cognizant of local fiscal needs) will bring important benefits to state business activity.

Programs such as those described above are the basis for competitive monetary incentives in the modern, global market for economic development.

E. [Get The Job Done!](#)

Workforce training is consistently viewed as one of the most important aspects of site selection. Evolving demographic patterns suggest that this factor will remain critical over an extended horizon. Texas must complement its current Self-Sufficiency Fund and Skills Development Fund with a comprehensive, employer-driven program. The pitfalls of the prior Smart Jobs Fund should be avoided by making the initiative outcomes oriented and otherwise strengthened as discussed at length previously. Given its experience and overall focus, it is probably best that the Texas Workforce Commission manage the program. It is important, however, that criteria be established which clearly define the proper objectives and evaluation criteria for the new program. It must be focused on site selection and business development rather than other social goals. Such a focus is notably different from the existing programs within the state (which emphasize number of persons trained rather than specific employer needs), but is the proper approach to ensure competitiveness.





F. Find Me The Money!

Capital access is critical to a complete and successful economic development agenda. It is particularly important for small businesses, emerging technology sectors, and less advantaged regions of the state. Texas should use all reasonable means at its disposal to encourage private-sector lending and investment in the state. Moreover, various credit enhancement programs (linked deposits, reserve funds, etc.) should be enlarged. In fact, an Economic Development Bank to oversee and promote such efforts could be a substantial impetus to economic expansion in all parts of the state. Texas should also take appropriate steps to encourage incubators to spur new company startups, particularly in emerging technologies, as well as other mechanisms to expedite technology transfer.

G. Help From Above!

Federal programs to promote growth, whatever their merits, are available throughout the country. Texas can gain benefits in many areas by more effectively accessing these resources. Concerted efforts should be made to maximize the use of these external funds in such areas as, among others, research and development, job training, and community development. Such an initiative is critically important in the agenda supported by the Governor's Council on Science and Biotechnology Development, and is vital to maintaining competitiveness in many other areas. The state should also develop an aggressive agenda to ensure equitable treatment in the upcoming military base realignment process.

H. Sell It!

Marketing is an essential part of any competitive framework with differentiated offerings. Texas has a proven and highly successful program to promote tourism. It should be maintained and provided with sufficient resources to be more effective. Despite impressive achievements, there is substantial upside potential; a redefined set of consumer demands has surfaced in light of 9/11, and others states are increasing their promotional campaigns. Greater flexibility could better leverage funds to take advantage of cooperative endeavors and the benefits of the Internet in global outreach. This plan is working; it ain't broke; expand it, but don't fix it. (Greater support of cultural endeavors can also have a





positive effect on tourism and the overall economic environment.)

Texas must adopt a comparable effort to market the state as a location for economic development and new activity. This effort should be of sufficient magnitude to reach key decision-makers throughout the world. As part of this program, international trade should be encouraged on a more comprehensive and systematic basis.

I. Focus It!

In order to effectively utilize state resources for maximum impact, strategies should be focused toward clusters of production where Texas is presently competitive or has definitive prospects for success. This analysis identified fifteen such segments, although these will change over time as new market conditions and technologies surface.

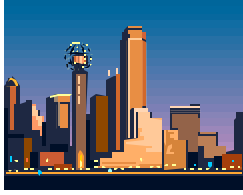
J. Spread It Around!

Economic development strategies around the country have often proved to be more successful if implemented on a regional basis. The diversity of Texas makes it difficult to have a unified “one size fits all” program. On the other hand, local entities frequently lack the full set of prerequisites and tools needed to attract major prospects. Thus, for the purpose of the study, the twenty-four planning regions (COG regions) are used as the “unit of analysis.” An account of each of the areas is given in Appendix I, including targeted industry clusters for focused recruitment. Attention should also be given to geographic clusters—such as inner cities, the border, and rural Texas—with unique development needs. Specific issues related to these areas have been emphasized throughout this analysis.

K. Dance With Them What Brung Ya!

In the course of this study, frequent mention has been made of “relocations, expansions, and retentions.” While there is a natural and almost irresistible tendency to focus on new facilities, it must be recognized that (1) most jobs are created by existing firms or new startups and (2) maintaining current employers is a vital element of a stable economic base. Some losses (such as the movement offshore of the apparel industry) are an inevitable byproduct of global integration or





evolving technology; others can be prevented. Capital access programs and other initiatives to encourage reinvestment by current employers should be an integral part of the economic development program. This strategy should be emphasized both in state eligibility criteria and in the training of local economic development officials.

L. **Coordinate, But Don't Consolidate!**

As noted earlier, numerous state agencies play some role in economic development. There are also myriad local entities and federal programs involved. It does not appear practical or prudent to combine all of these efforts under a single entity. In fact, many segments of government have specific expertise in areas which impact business expansion prospects. Texas Economic Development is the proper place for tourism marketing and lead generation; the Comptroller of Public Accounts is well suited to administer tax programs; the Texas Workforce Commission knows how to manage job training; and other areas of experience and capability distinguish various aspects of State government. Similarly, some agencies have specific characteristics which are well suited to the programs under their auspices.

On the other hand, there is a definitive need to coordinate programs in many situations. State-level marketing can interact with local governments to maximize efforts. In the selection process for major projects, it is often necessary to marshal inducements from multiple sources and governmental levels. An information clearinghouse which fully spans all programs can also be invaluable as a resource for companies, executives, site selection consultants, economic development professionals, elected officials, and other constituencies. An ability to pull things together efficiently and expeditiously can facilitate the expansion of opportunities and ensure that the Governor and other elected officials are involved at appropriate times.

Effective coordination of key facets of the economic development process is an integral part of achieving full potential. Nonetheless, total consolidation of disparate programs is not a productive approach.





M. Take It From The Top!

In the contemporary environment, securing long-range prosperity involves multiple aspects of public and private activity. Competition has also reached unprecedented levels on many fronts. One result of these phenomena is an increased and more direct role for governors in economic development. As the chief spokesperson for their states, governors have become an integral part of both negotiations and structuring appropriate programs and packages. To be effective in this framework, Texas needs to (1) provide strike force capability on a par with key competitors and (2) more fully integrate the Office of the Governor into the entire development agenda.

N. Keep Texas Economic Development!

Texas Economic Development, the agency bearing the bulk of responsibility in this arena, is slated for Sunset review by the Texas Legislature and was the subject of some controversy regarding the demise of the Smart Jobs Fund. This study has examined programs in other states, reviewed functions and programs within Texas, and performed a broad-based assessment of the present and future of economic development in multiple contexts. These efforts have resulted in a clear, unambiguous and definitive conclusion that Texas must maintain a department tasked with the most visible aspects of promoting business expansion and job creation. This activity should be closely integrated with the Office of the Governor. Because of the importance of this issue to the future of various programs within the state, it is the subject of a separate section.

VIII. The Role of Texas Economic Development

The optimal role for Texas Economic Development in stimulating long-range growth appears to rest on the following functions.

- ✓ **Administer the State Tourism Campaign.** TxED has overseen this program for an extended period and accomplished significant results. Continuation of this role in an agency dealing with overall development strategies and possessing a proven track record and expertise is a logical and efficient approach.





- ✓ **Market Texas as an Industrial Location.** A targeted marketing campaign focused on generating leads and awareness among key participants in the site selection community (through media, trade shows, and other established methods) is crucial, and TxED is an ideal entity to supervise this effort. Extensive experience in basic marketing, a history of identifying and communicating with prospects, and experienced staff in the economic development arena suggest the use of the agency for this purpose.
- ✓ **Coordinate Foreign Trade Expansion Efforts.** As the emerging economy becomes more global, the role of Texas firms in the international economy becomes more important. TxED currently organizes numerous trade initiatives, but the overall program should be expanded.
- ✓ **Coordinate Economic Development Efforts.** Texas has access to diverse programs which can impact success in site selection and will hopefully add to the mix in the near future. These incentives are scattered across multiple local, regional, state, and national entities. TxED needs to serve as the coordinator to organize efforts and help structure viable packages. This task requires both a “big picture” view of available options and an extensive understanding of program details, eligibility criteria, and other relevant factors. In situations when quick response is needed, a state coordinating entity can play a vital and indispensable role. Because of the increasing presence of state leaders in major recruitment efforts, these functions should be performed in close cooperation with the Governor’s office.
- ✓ **Serve as a Super Clearinghouse for Economic Development Initiatives.** Texas needs a single source for “one stop shopping” on various training opportunities (including those for economic development professionals and community leaders), export promotion, programs available through multiple agencies, economic data frequently needed in economic development initiatives, leads for new activity, marketing opportunities, and other pertinent information. This function also incorporates access to available research on relevant topics and ongoing





analysis of key issues that affect prospects in Texas (possibly in cooperation with the Comptroller of Public Accounts). TxED is already involved in much of this type of activity and is the logical entity to oversee an expanded and truly competitive program.

- ✓ **Provide Economic Development Assistance to Individual Areas.** TxED should manage an expanded program to provide expertise to communities and regional entities throughout the state. Although such services should be made universally available, the most pressing need may well prove to be in mid-sized urban areas. The Office of Community and Rural Affairs has programs to assist in smaller areas and the largest metropolitan areas tend to have relatively extensive internal capabilities. TxED can be an invaluable resource in understanding and accessing various programs, extending global reach, providing feedback on local and regional initiatives, and facilitating appropriate training on key relevant issues. Such a role involves coordination of efforts and could go far in enhancing the overall efficiency of economic development outlays and programs throughout the state.
- ✓ **Assist in Program Administration and Approval.** Although much of the complexity of current economic development initiatives needs to be removed, some type of certification or approval requirements are likely to be retained in many programs. TxED currently performs many such functions. To the extent necessary, these efforts should be continued and potentially expanded to encompass other programs with similar criteria to expedite project implementation and eliminate unnecessary overlap. If an Economic Development Bank is created, TxED could play a similar coordinating functions, although actual fund disbursement is probably best supervised by the Comptroller of Public Accounts.

This list does not purport to be comprehensive, as there are other functions that a lead state agency in economic development could effectively perform. It is more than sufficient to illustrate, however, the appropriateness of ensuring a recognized voice in this arena, that is, a “1-800-TEXAS.” TxED is an ideal vehicle to maintain the level of





awareness, information, and assistance needed to be competitive in the current environment.

IX. Conclusion

Texas has a long and proud history and heritage. Over the years, it has weathered many challenges to provide citizens across a vast territory with opportunities, often being a national leader in economic growth. It has survived wars, depressions, droughts, hurricanes, oil busts, bank failures, real estate debacles, and a hundred other calamities only to emerge stronger and more diverse. If the Lone Star State is to continue that record of achievement into the new century, it must adapt to global integration, rapidly evolving technology, and fundamental changes in the industrial framework to assure success. Texas has a legacy of responding to change. Its resilience and resolve will be thoroughly tested in the coming years, but, if past performance is any guide, it will ultimately be successful.

This study has sought to examine the economic development prospects of Texas from many perspectives and to provide frameworks that properly characterize the environment and requisite responses. The research has been extensive and has sought to examine this complex issue in a comprehensive manner. The resulting recommendations reflect the new competitive marketplace and the necessary ingredients for ultimate success. Short-term fiscal resources are limited, and it is hard to justify new programs and outlays under such circumstances; these are simple facts. On the other hand, the need to ensure long-term prosperity and fiscal health make it impossible not to recommend essential initiatives. **Texas is at a crucial crossroads in shaping its economic future, and, whether through action or inaction, a path will be chosen. This analysis seeks to offer mechanisms to assist in the process of assuring that the state assumes its proper place as a global leader in economic growth and job creation in the 21st Century.**

Respectfully submitted,

M. Ray Perryman, President
The Perryman Group





Texas, Our Texas:

An Assessment of Economic Development Programs and Prospects in the Lone Star State

VOLUME II APPENDICES

Prepared as a Public Service by



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VOLUME II APPENDICES

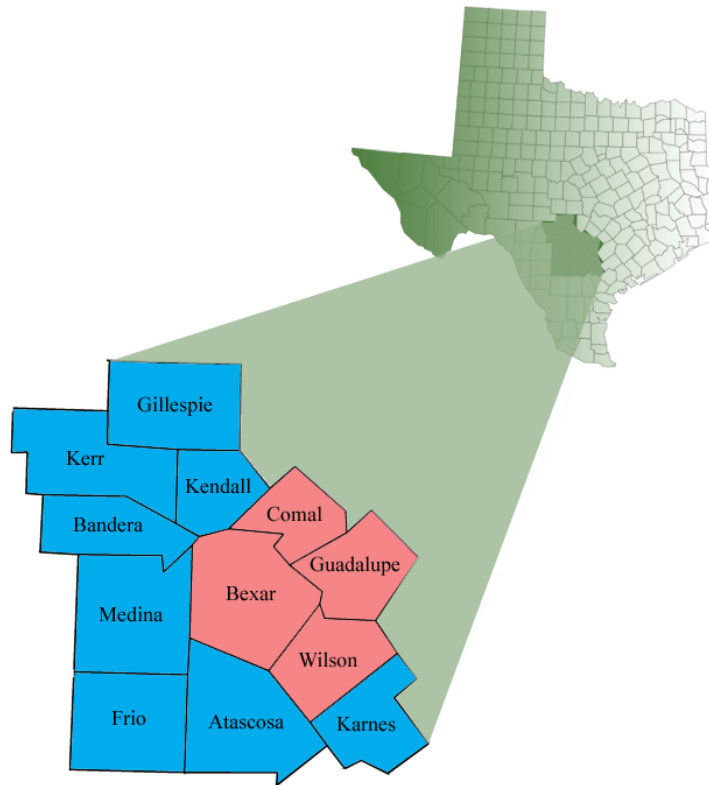
Appendix I: Regional Profiles

Alamo Council of Governments (COG) Region
Brazos Valley Council of Governments (COG) Region
Capital Council of Governments (COG) Region
Central Texas Council of Governments (COG) Region
Coastal Bend Council of Governments (COG) Region
Concho Valley Council of Governments (COG) Region
Deep East Texas Council of Governments (COG) Region
East Texas Council of Governments (COG) Region
Golden Crescent Council of Governments (COG) Region
Gulf Coast Council of Governments (COG) Region
Heart of Texas Council of Governments (COG) Region
Lower Rio Grande Council of Governments (COG) Region
Middle Rio Grande Council of Governments (COG) Region
North Texas Council of Governments (COG) Region
North Central Texas Council of Governments (COG) Region
North East Texas Council of Governments (COG) Region
Panhandle Council of Governments (COG) Region
Permian Basin Council of Governments (COG) Region
South Plains Council of Governments (COG) Region
South Texas Council of Governments (COG) Region
South East Texas Council of Governments (COG) Region
Texoma Council of Governments (COG) Region
Upper Rio Grande Council of Governments (COG) Region
West Central Texas Council of Governments (COG) Region

Appendix II: Firm Information

Project Staff
The Perryman Group Firm Profile
Biographical Profile: M. Ray Perryman

Alamo Council of Governments (COG) Region Profile and Target Clusters



Atascosa, Bandera, Bexar, Comal, Frio, Gillespie, Guadalupe, Karnes, Kendall, Kerr, Medina, and Wilson counties comprise the Alamo COG. The San Antonio Metropolitan Statistical Area (MSA) is located in the region and dominates the regional economy.

Over the past several years, this area has experienced notable economic growth. NAFTA-related export activity has led to the addition of jobs across a spectrum of industries; healthcare, military activities, and tourism helped provide a secure economic base.

San Antonio is the eighth largest city in the US and has the third highest population in the Lone Star State. Approximately one-third of the MSA's residents are under 21 years of age and another quarter are over 50. More than one-third of the workforce is involved in healthcare and social services, retail trade, and hospitality activities. High-tech jobs are primarily in research and development. The number of workers has increased recently in the local government and educational services industries, principally due to the addition of teachers and staff in the school system.

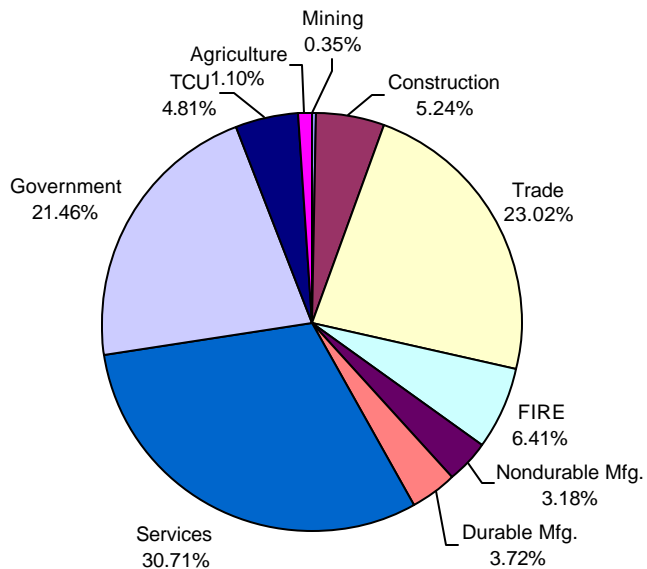


Alamo COG Key Economic Indicators 1990-2000

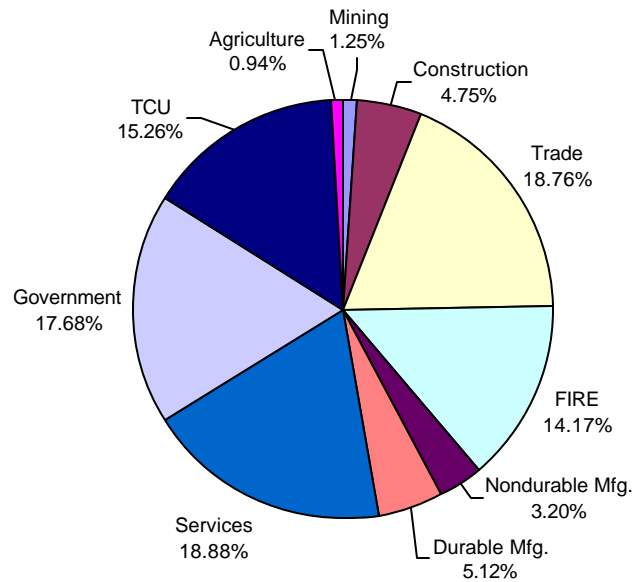
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR 1990-2000
Population	1,490,460	1,816,110	2.00 %	21.85 %	2.08 %
Output (RGP-Real Gross Product)	\$31.51 bil	\$48.40 bil	4.39 %	53.61 %	4.55 %
Wage & Salary Employment	630,530	853,290	3.07 %	35.33 %	2.87 %
Per Capita Personal Income	\$16,170	\$25,260	4.56 %	56.24 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the Alamo Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
Alamo Council of Governments 2000**



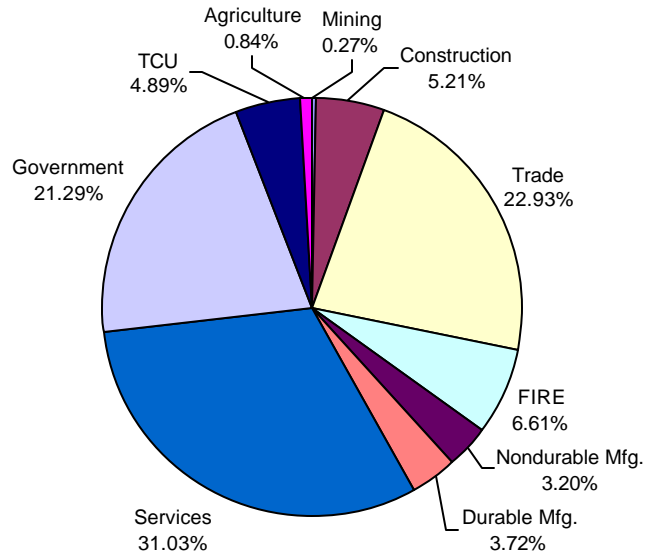
**San Antonio MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	1,327,600	1,599,380	1.9 %	20.5 %	2.1 %
Output (RGP- Real Gross Product)	\$29.64 bil	\$45.56 bil	4.4 %	53.7 %	4.5 %
Wage & Salary Employment	586,610	790,330	3.0 %	34.7 %	2.9 %
Per Capita Personal Income	\$16,340	\$25,740	4.6 %	57.5 %	4.8 %

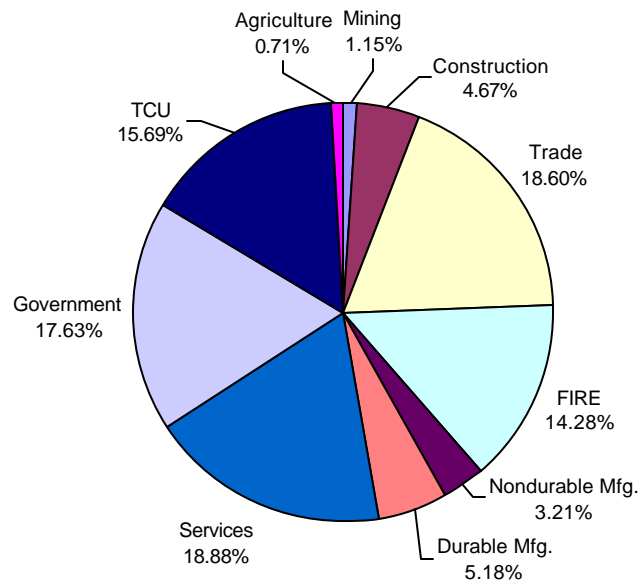
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
San Antonio MSA 2000**



**Sectoral Composition of Real Gross Product for the
San Antonio MSA 2000**



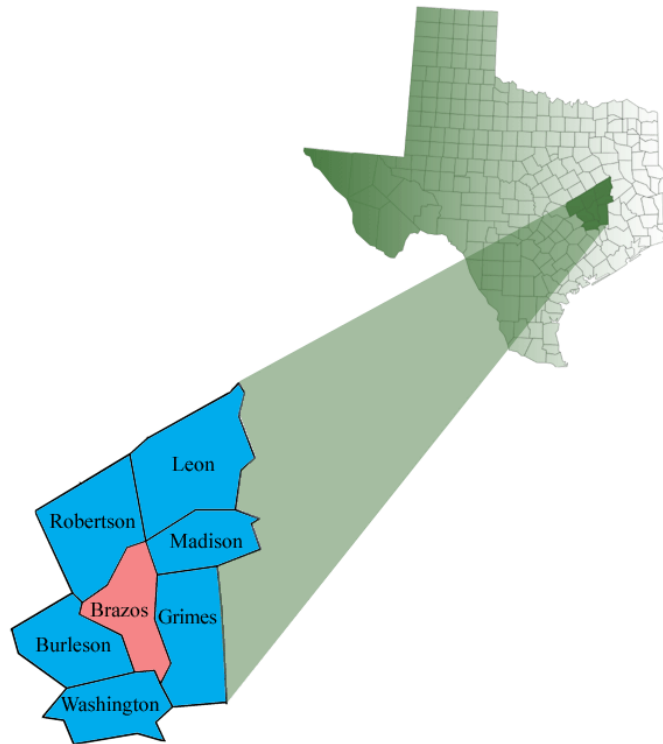
Alamo Council of Governments Region Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Corporate Headquarters Cluster
Business Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Transportation Equipment Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Brazos Valley Council of Governments (COG) Region

Profile and Target Clusters

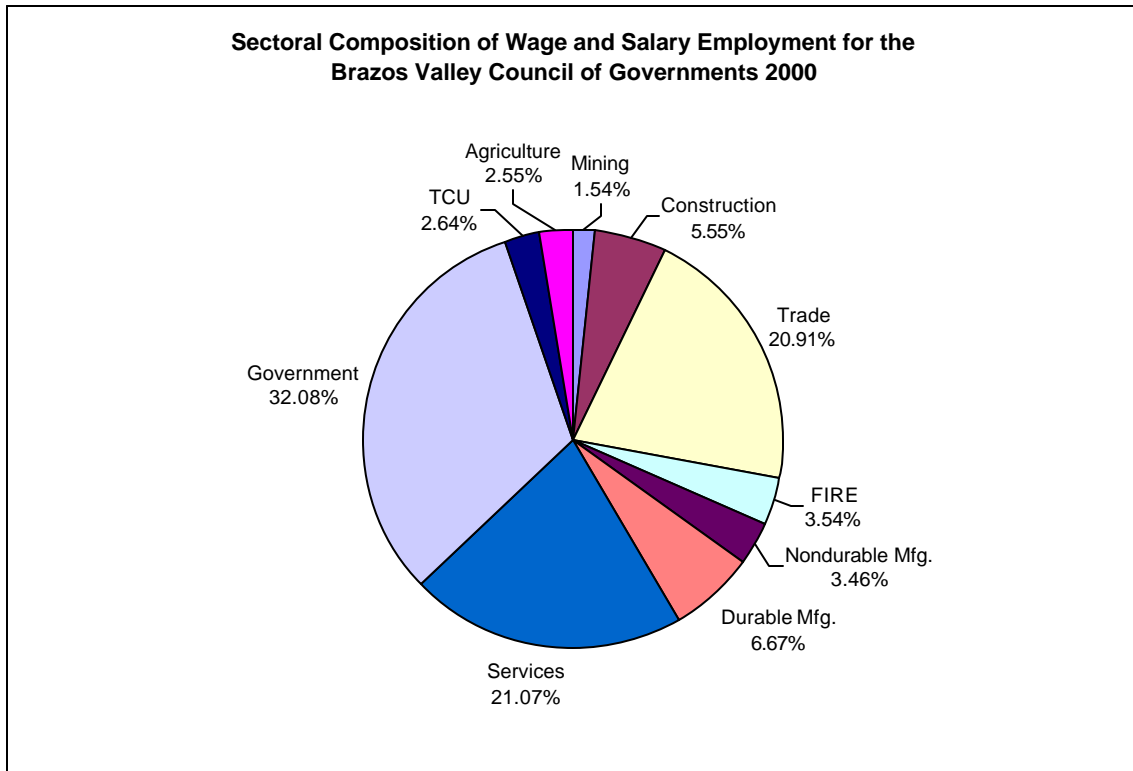


The Brazos Valley COG is comprised of the Bryan-College Station Metropolitan Statistical Area (MSA—Brazos County), as well as Burleson, Grimes, Leon, Madison, Robertson, and Washington counties.

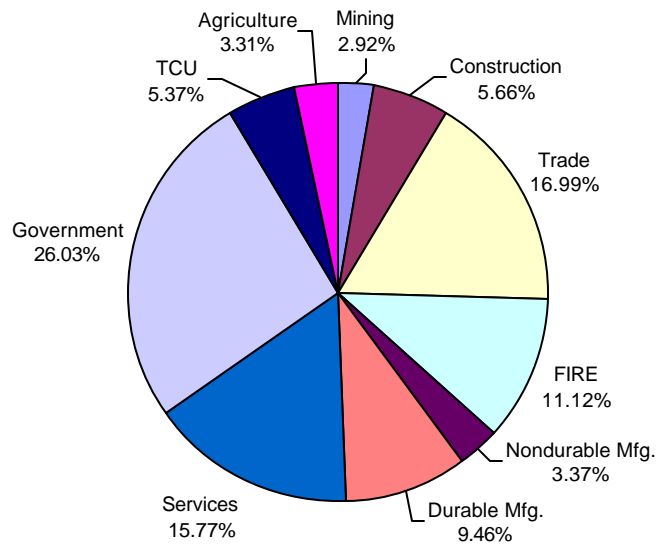
A key component of the area economy is Texas A&M University, one of the nation's leading institutions of higher education. Government, trade, and services are the three largest industrial categories. Medical services, research, and agribusiness activities are particularly important to the regional economy. In Bryan-College Station, seasonal changes in employment coincide with the school year, but in general, the area enjoys a relatively low level of joblessness.



Brazos Valley COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	220,100	267,730	1.98 %	21.64 %	2.08 %
Output (RGP-Real Gross Product)	\$3.58 bil	\$5.14 bil	3.67 %	43.38 %	4.55 %
Wage & Salary Employment	86,760	117,260	3.06 %	35.15 %	2.87 %
Per Capita Personal Income	\$13,570	\$20,350	4.14 %	49.98 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Brazos Valley Council of Governments 2000**



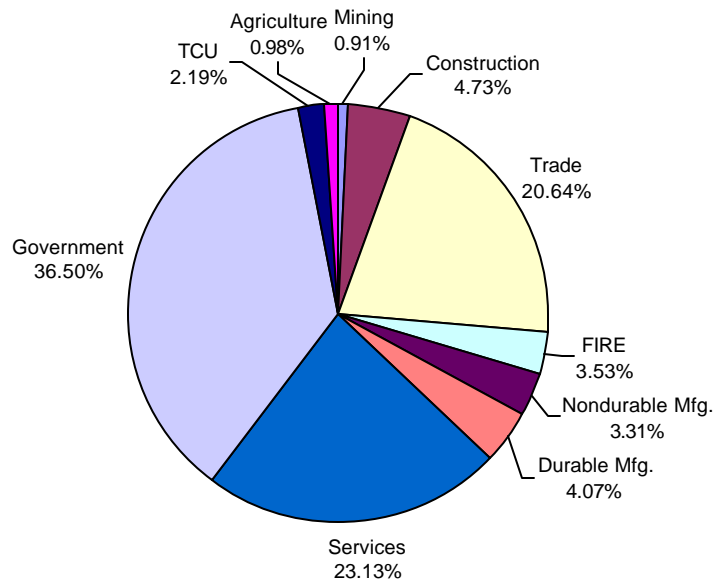
**Bryan-College Station MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	122,350	152,660	2.2 %	24.8 %	2.1 %
Output (RGP-Real Gross Product)	\$2.24 bil	\$3.26 bil	3.8 %	45.6 %	4.5 %
Wage & Salary Employment	56,000	78,460	3.4 %	40.1 %	2.9 %
Per Capita Personal Income	\$13,200	\$20,030	4.3 %	51.7 %	4.8 %

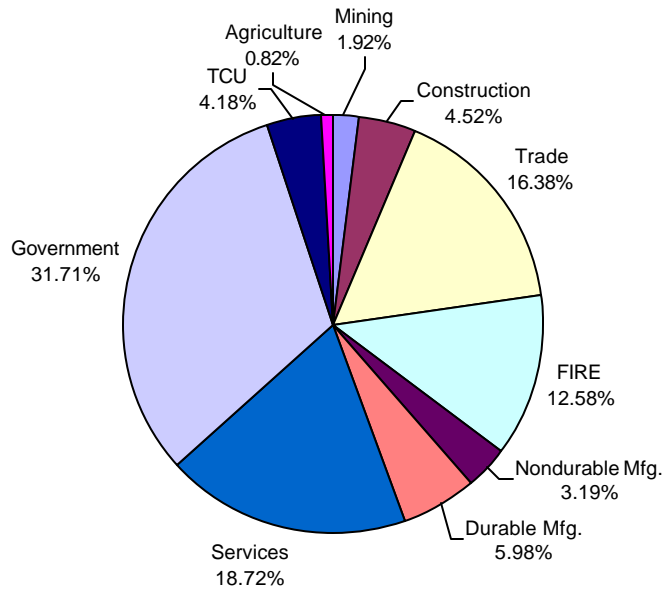
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Bryan-College Station MSA 2000**



**Sectoral Composition of Real Gross Product for the
Bryan-College Station MSA 2000**



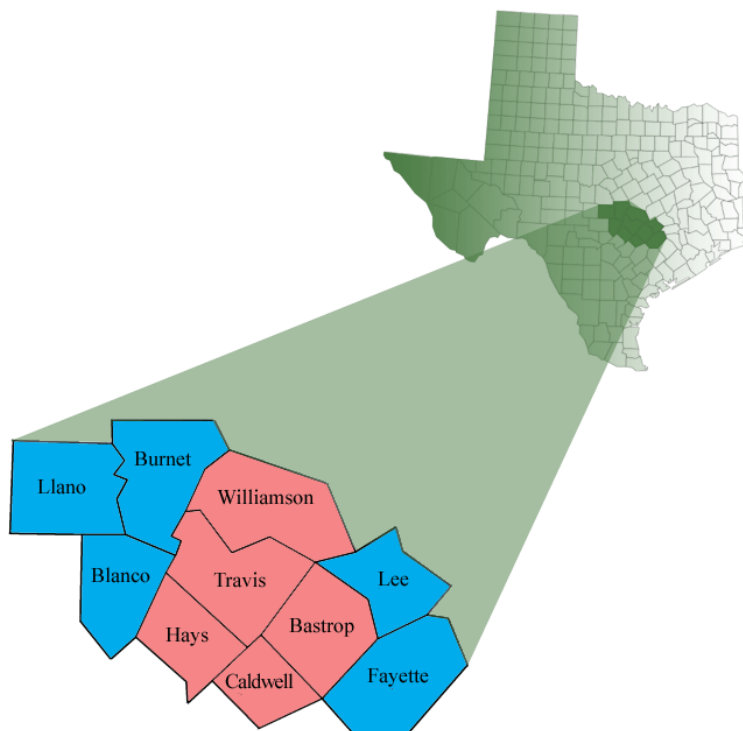
Brazos Valley Council of Governments Region Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Heavy Construction Cluster
Energy Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



Capital Council of Governments (COG) Region Profile and Target Clusters



The Austin-San Marcos Metropolitan Statistical Area and surrounding counties (Bastrop, Blanco, Burnet, Caldwell, Fayette, Hays, Lee, Llano, Travis, and Williamson counties) comprise the Capital COG Region. This area greatly benefited from the phenomenal growth experienced in high-tech industries and the durable manufacturing sector, particularly computers and computer-related products, over the 1990s; the more recent collapse of high-tech manufacturing has temporarily dampened this segment of the economy. Even so, the area's overall economy remains stable in part to its business-friendly and entrepreneurial-supportive atmosphere and the growing diversification of its business operations.

With Austin being the state capital and the MSA having more than 100,000 students enrolled in the area's seven major colleges and universities, government and education make significant contributions to the economy. Tourism also remains highly important, and the region is becoming an increasingly popular place for retirement. The area's location on the I-35 Corridor enables it to be at the forefront of the expanding NAFTA-related activities. Services and trade are the area's two leading industries in terms of number of workers.

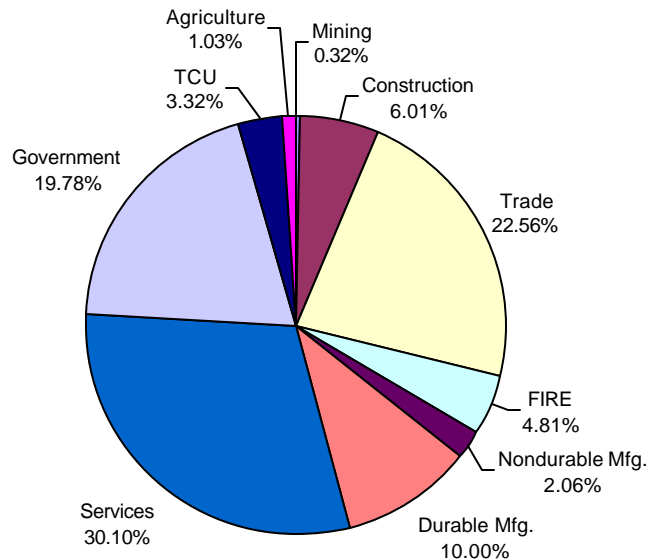


Capital COG Key Economic Indicators 1990-2000

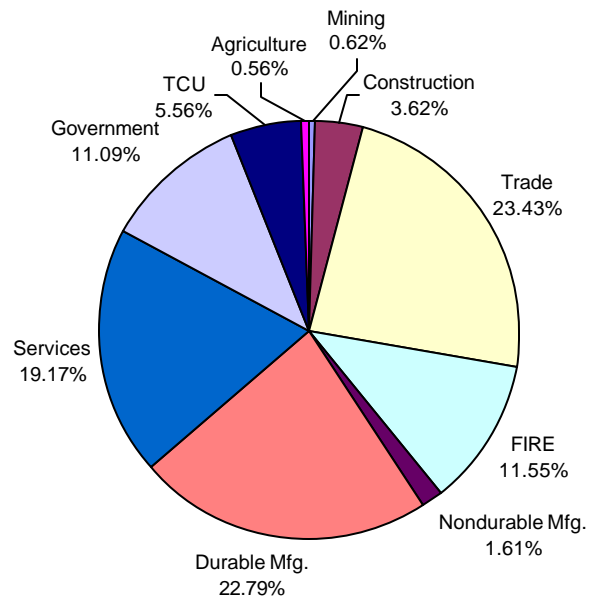
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	925,040	1,361,280	3.94 %	47.16 %	2.08 %
Output (RGP-Real Gross Product)	\$21.61 bil	\$55.92 bil	9.97 %	158.77 %	4.55 %
Wage & Salary Employment	441,020	739,150	5.3 %	67.6 %	2.87 %
Per Capita Personal Income	\$17,880	\$31,340	5.77 %	75.30 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the Capital Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
Capital Council of Governments 2000**



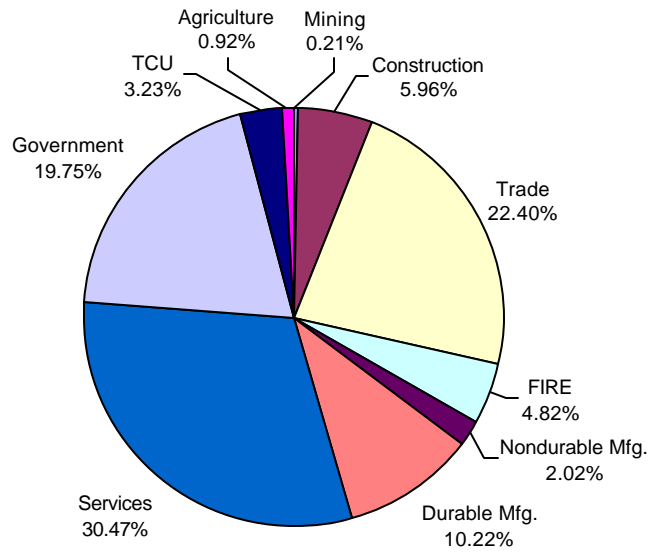
**Austin-San Marcos MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	851,900	1,263,560	4.0 %	48.3 %	2.1 %
Output (RGP-Real Gross Product)	\$20.58 bil	\$54.36 bil	10.2 %	164.1 %	4.5 %
Wage & Salary Employment	418,160	707,310	5.4 %	69.1 %	2.9 %
Per Capita Personal Income	\$18,070	\$32,040	5.9 %	77.4 %	4.8 %

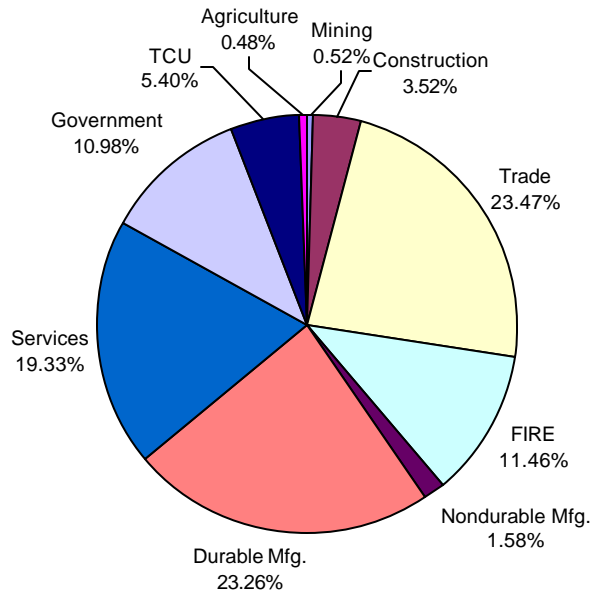
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Austin MSA 2000**



**Sectoral Composition of Real Gross Product for the
Austin MSA 2000**

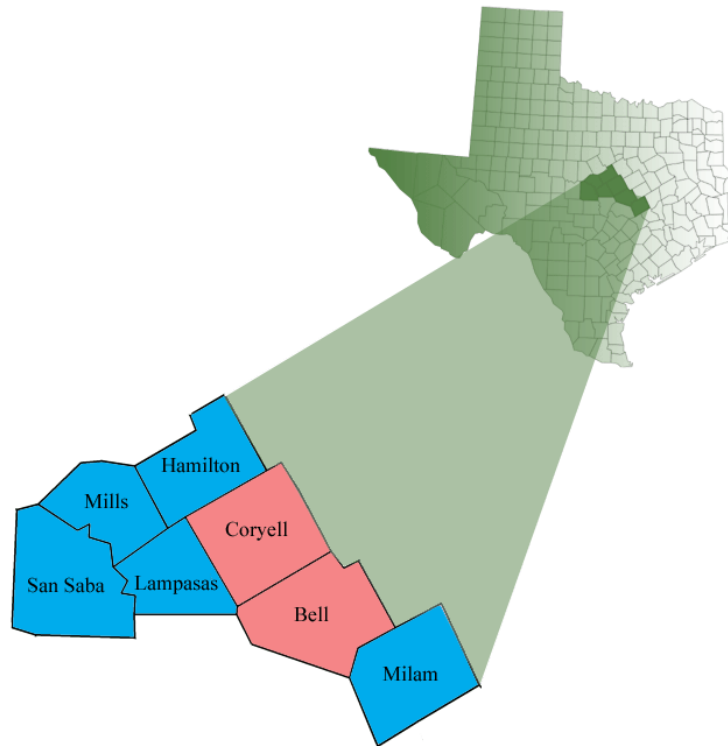


Capital Council of Governments Region Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Emerging Nanotechnology and Materials Cluster
Electronics Cluster
Information Services Cluster
Applied Technology Cluster
Corporate Headquarters Cluster
Business Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

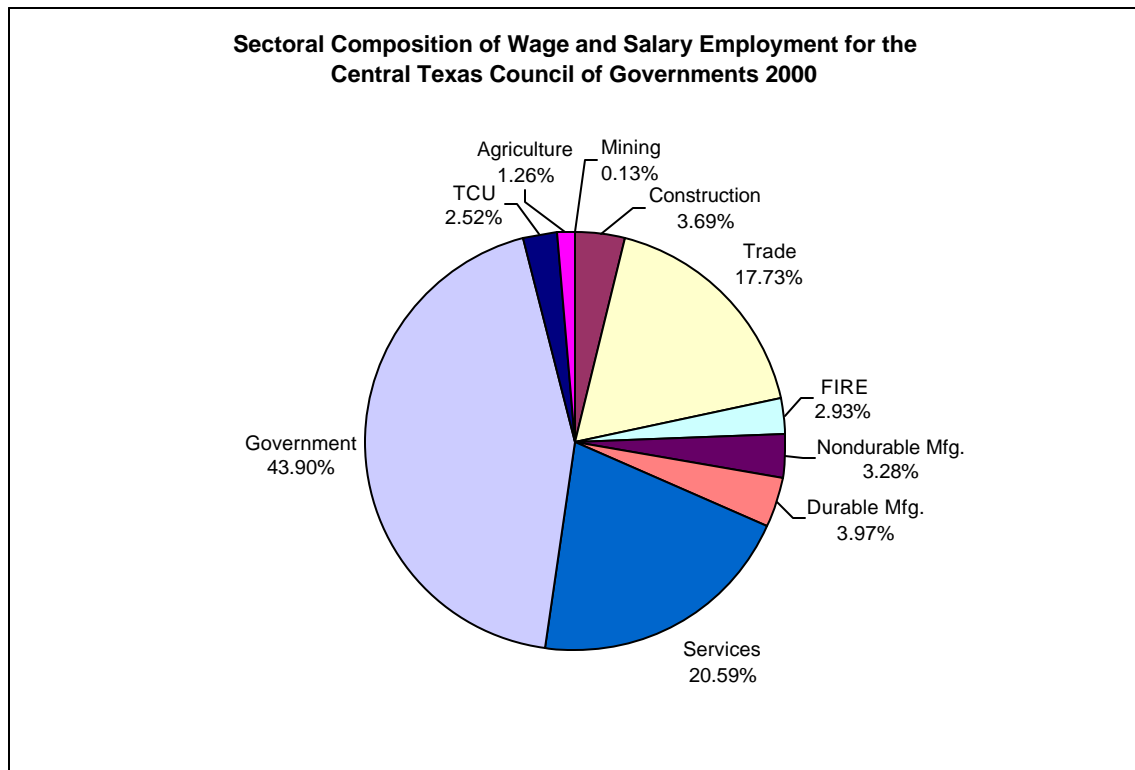
Central Texas Council of Governments (COG) Region Profile and Target Clusters



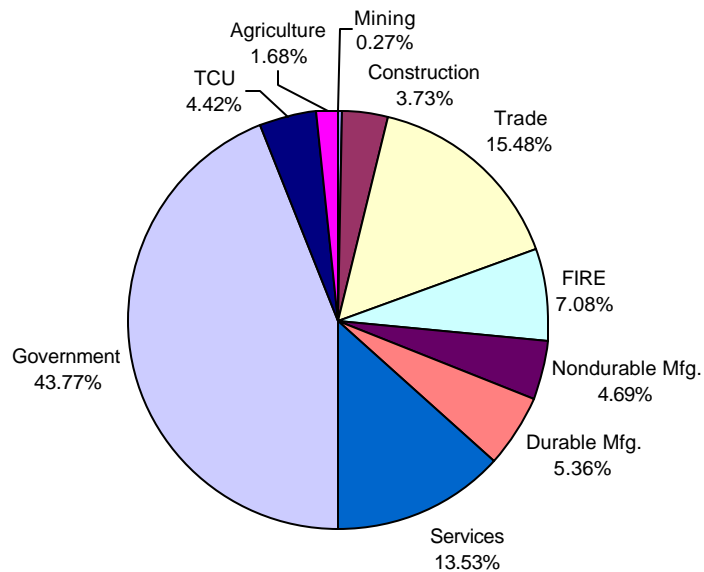
Bell, Coryell, Hamilton, Lampasas, Milam, Mills, and San Saba counties comprise the Central Texas COG Region. The Killeen-Temple Metropolitan Statistical Area (MSA) is located in the region. The leading industries in the region include military, medical, agribusiness, and manufacturing. The hospital systems are nationally renowned, and there are more than twenty-five small- to medium-sized manufacturing, processing, and distribution entities in the Killeen-Temple MSA alone. In fact, the metro area is one of the fastest-growing in the state. As the largest employer in the region, Fort Hood is highly important to the continuing growth and development of the community.



Central Texas COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	310,060	376,030	1.95 %	21.28 %	2.08 %
Output (RGP-Real Gross Product)	\$5.55 bil	\$7.96 bil	3.68 %	43.51 %	4.55 %
Wage & Salary Employment	131,260	170,320	2.64 %	29.76 %	2.87 %
Per Capita Personal Income	\$14,520	\$22,330	4.40 %	53.77 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Central Texas Council of Governments 2000**



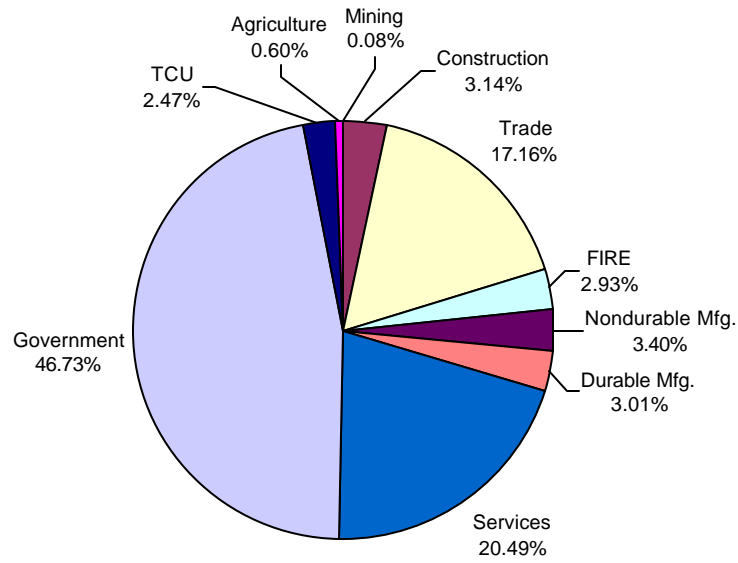
**Killeen-Temple MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	256,000	314,250	2.1 %	22.8 %	2.1 %
Output (RGP-Real Gross Product)	\$4.87 bil	\$7.04 bil	3.8 %	44.6 %	4.5 %
Wage & Salary Employment	116,220	150,970	2.7 %	29.9 %	2.9 %
Per Capita Personal Income	\$14,690	\$22,700	4.4 %	54.5 %	4.8 %

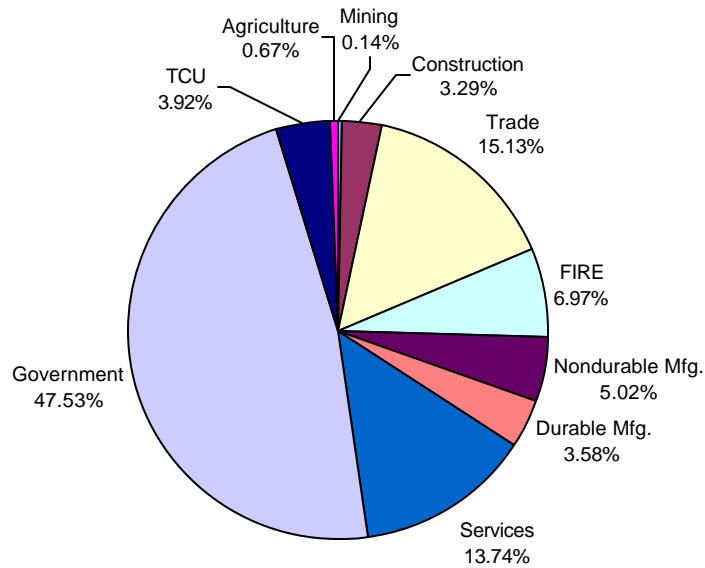
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Killeen-Temple MSA 2000**



**Sectoral Composition of Real Gross Product for the
Killeen-Temple MSA 2000**



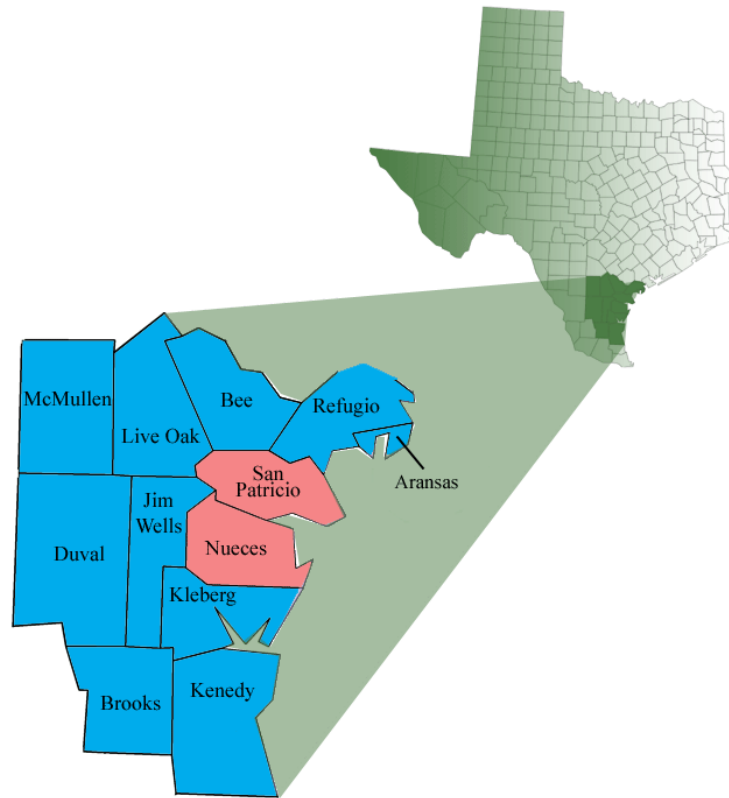
Central Texas Council of Governments Region Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Petroleum Refining and Chemical Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



Coastal Bend Council of Governments (COG) Region Profile and Target Clusters

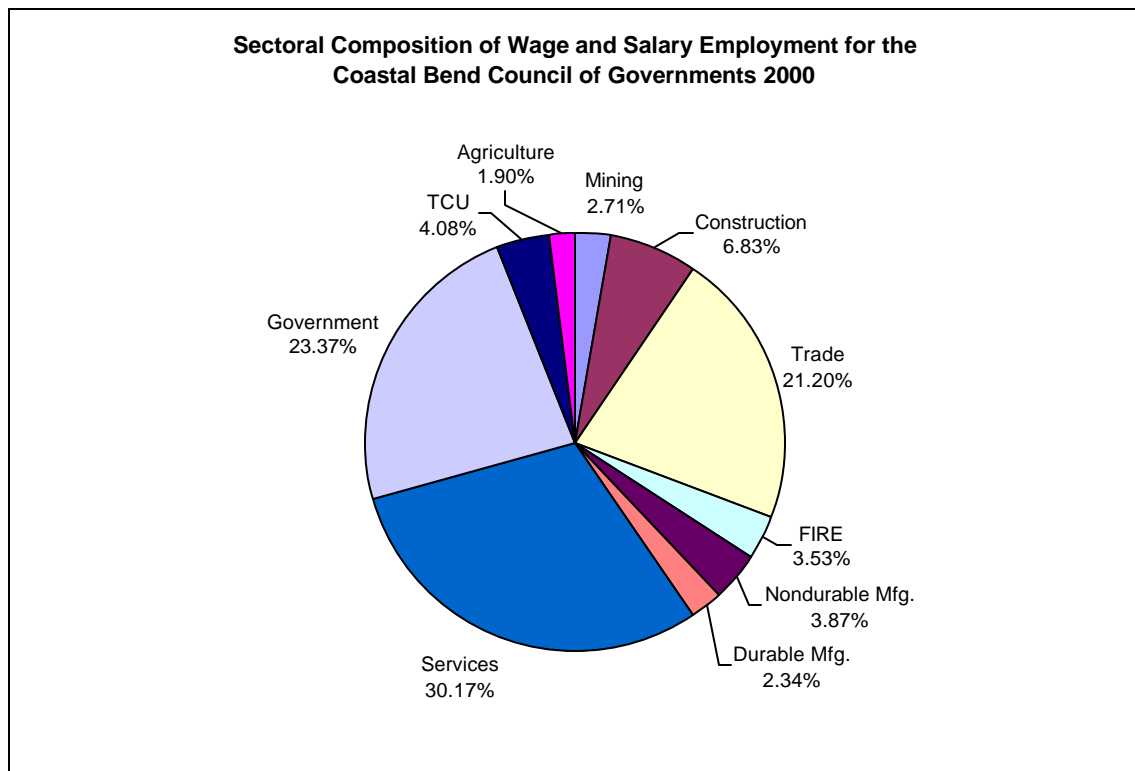


The Coastal Bend COG is comprised of Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak, McMullen, Nueces, Refugio, and San Patricio counties. The Corpus Christi Metropolitan Statistical Area (MSA) is an important part of the regional economy.

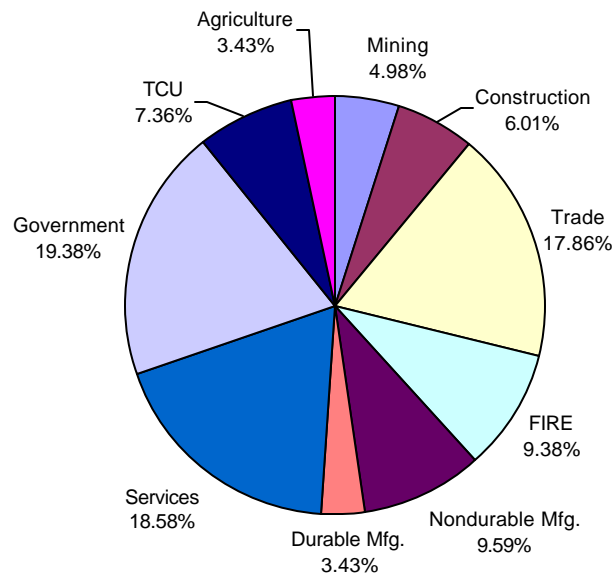
The Port of Corpus Christi, the seventh largest port in the US, supports coastal shipping and offshore oil and gas drilling. This MSA also receives substantial benefit from its large military complex, as well as myriad tourism activities. Petroleum processing and production, the manufacturing of petrochemicals, and agribusiness are also highly important to the regional economy.



Coastal Bend COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	500,870	548,860	0.92 %	9.58 %	2.08 %
Output (RGP Real Gross Product)	\$9.97 bil	\$11.66 bil	1.58 %	16.99 %	4.55 %
Wage & Salary Employment	190,980	231,680	1.95 %	21.31 %	2.87 %
Per Capita Personal Income	\$14,220	\$21,890	4.41 %	53.93 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Coastal Bend Council of Governments 2000**



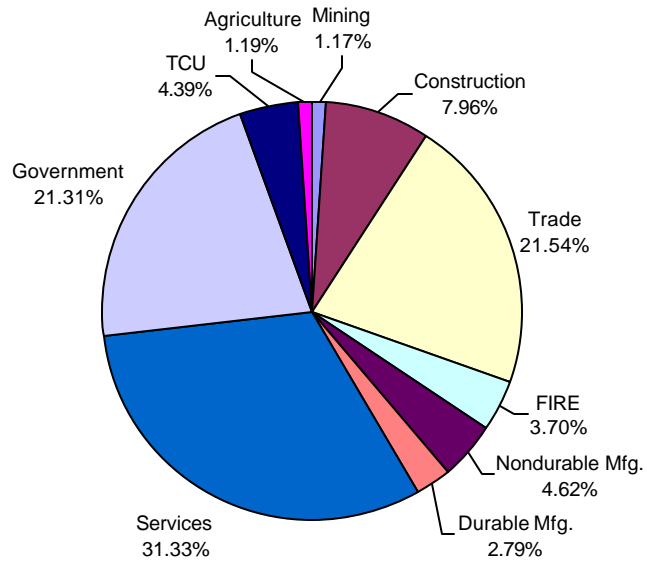
**Corpus Christi MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	350,390	380,690	0.8 %	8.6 %	2.1 %
Output (RGP-Real Gross Product)	\$7.75 bil	\$9.33 bil	1.9 %	20.3 %	4.5 %
Wage & Salary Employment	142,500	176,980	2.2 %	24.2 %	2.9 %
Per Capita Personal Income	\$15,060	\$23,320	4.5 %	54.8 %	4.8 %

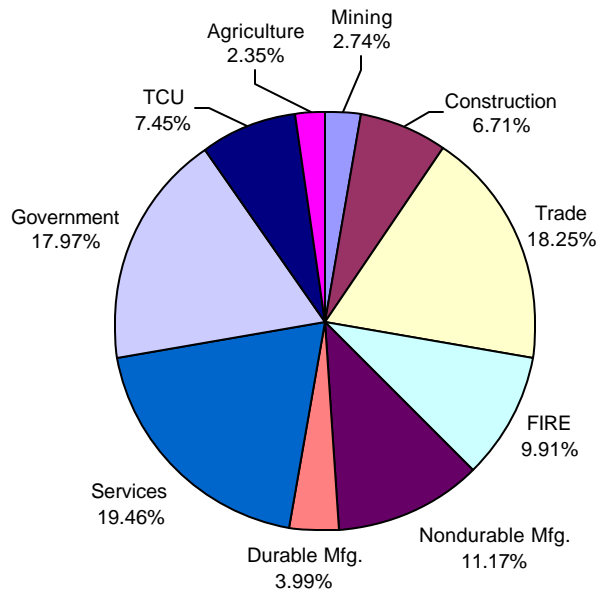
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Corpus Christi MSA 2000**



**Sectoral Composition of Real Gross Product for the
Corpus Christi MSA 2000**



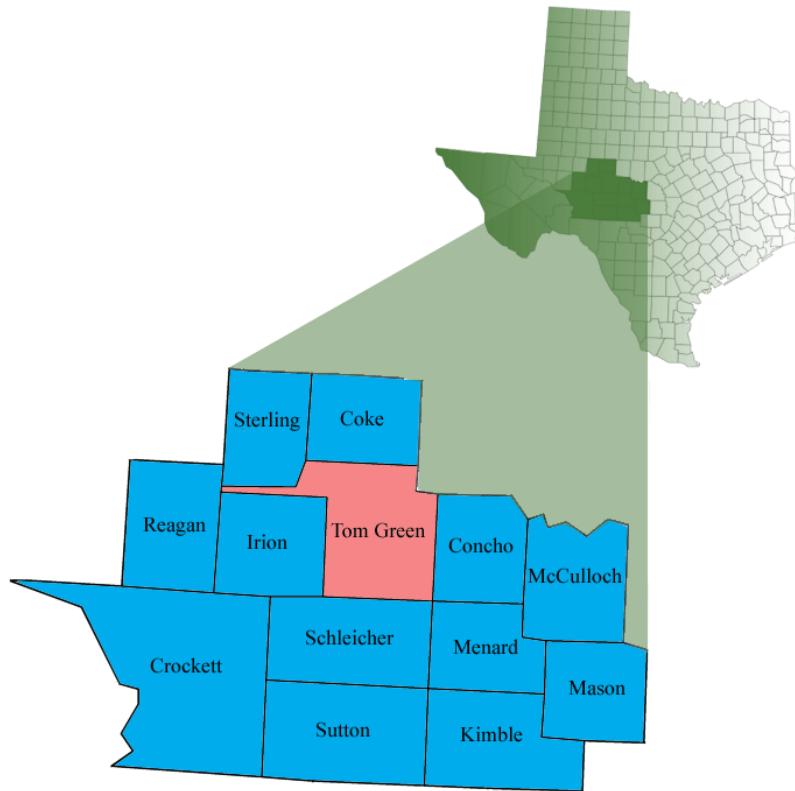
Coastal Bend Council of Governments Region Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



Concho Valley Council of Governments (COG) Region Profile and Target Clusters



Coke, Concho, Crockett, Irion, Kimble, Mason, McCulloch, Menard, Reagan, Schleicher, Sterling, Sutton, and Tom Green counties make up the Concho Valley COG. The region is also home to the San Angelo Metropolitan Statistical Area (MSA). Although the region has seen only moderate growth in the recent past, ongoing diversification efforts are enhancing the metro area's economic stability and prospects for future growth.

Cotton, beef, sheep, and goats are major contributors to the important agribusiness operations of the region. Leading industrial sectors in the metro area are services, trade, and government. Among the important industries impacting the MSA's economy are military (Goodfellow Air Force Base), manufacturing, healthcare, business services, and trade.

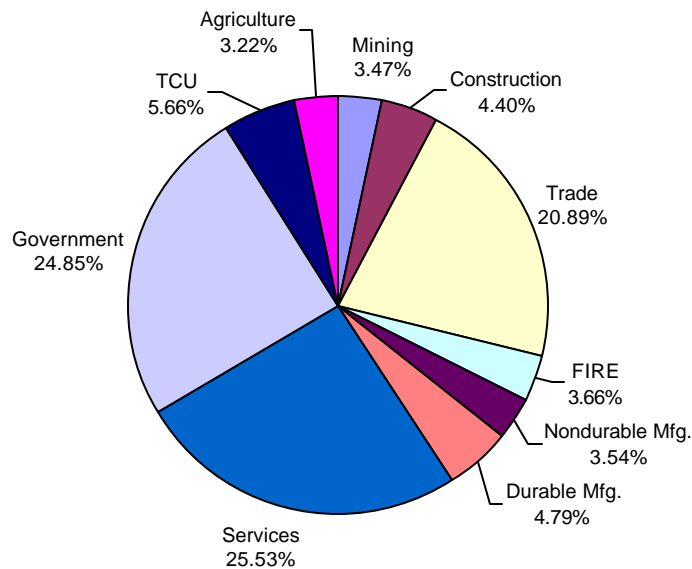


Concho Valley COG Key Economic Indicators 1990-2000

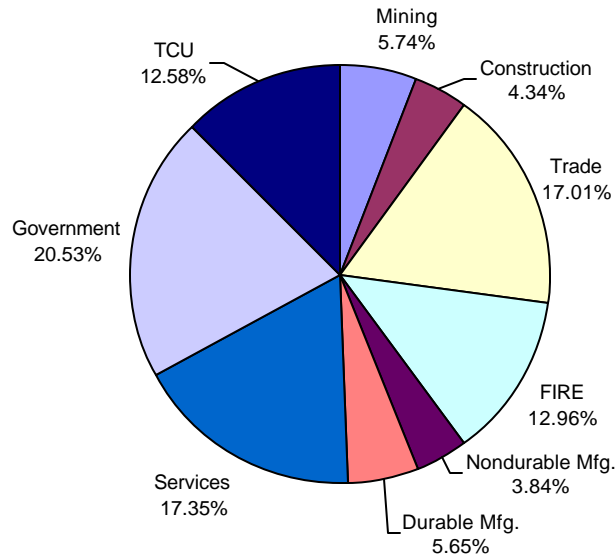
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	142,000	148,000	0.41 %	4.23 %	2.08 %
Output (RGP-Real Gross Product)	\$2.67 bil	\$2.94 bil	.99 %	10.4 %	4.55 %
Wage & Salary Employment	57,310	66,330	1.47 %	15.74 %	2.87 %
Per Capita Personal Income	\$14,980	\$22,290	4.05 %	48.79 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the Concho Valley Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
Concho Valley Council of Governments 2000**



Note: Value-added in agriculture was negative in 2000 and was omitted from graph.

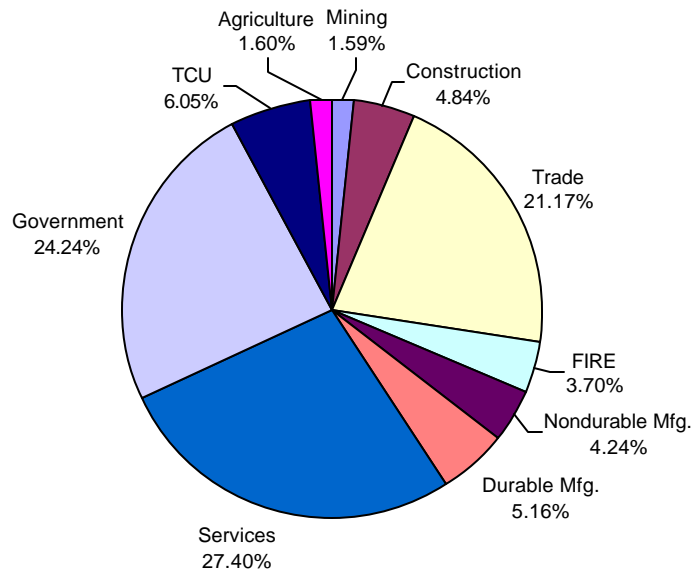
**San Angelo MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	98,300	103,970	0.6 %	5.8 %	2.1 %
Output (RGP-Real Gross Product)	\$1.95 bil	\$2.41 bil	2.1 %	23.4 %	4.5 %
Wage & Salary Employment	42,880	50,580	1.7 %	18.0 %	2.9 %
Per Capita Personal Income	\$15,840	\$24,230	4.3 %	53.0 %	4.8 %

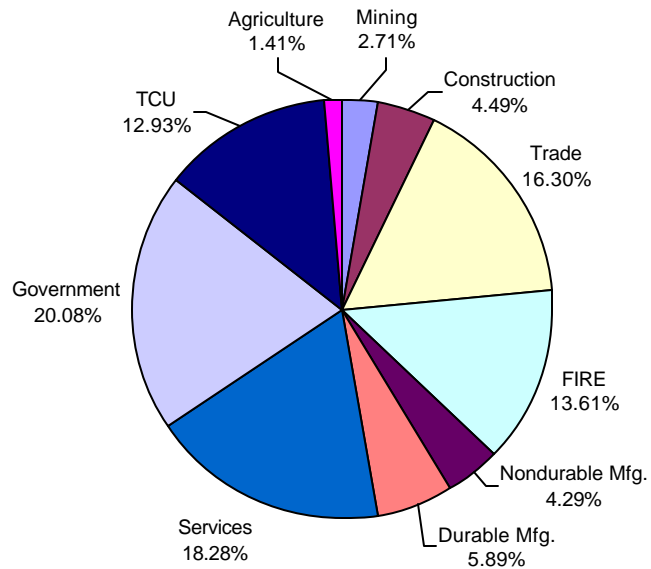
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
San Angelo MSA 2000**



**Sectoral Composition of Real Gross Product for the
San Angelo MSA 2000**



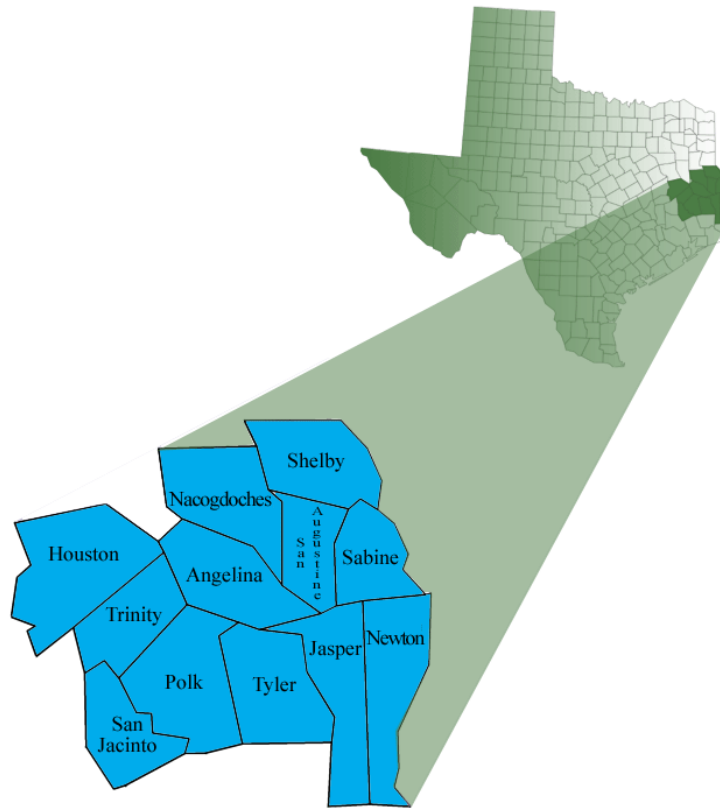
Concho Valley Council of Governments Region Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Heavy Construction Cluster
Energy Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



Deep East Texas Council of Governments (COG) Region Profile and Target Clusters



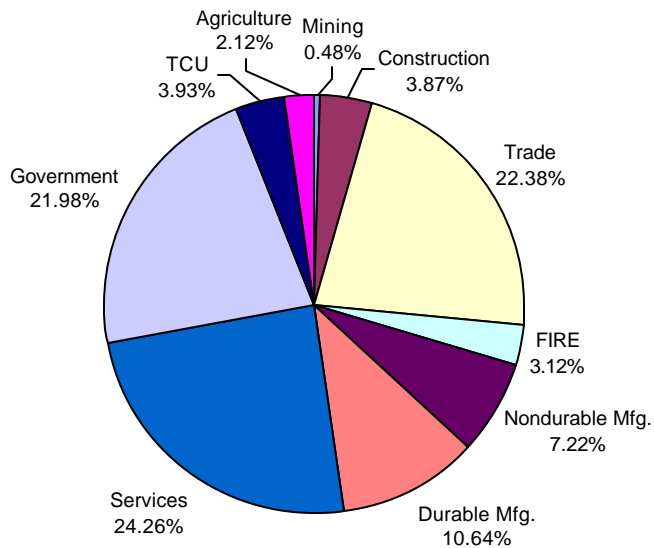
Angelina, Houston, Jasper, Nacogdoches, Newton, Polk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, and Tyler counties comprise the Deep East Texas COG. The region saw slow, but steady, growth over the decade of the 1990s, with gains across a variety of sectors. Historically, the timber industry has been a vital part of the area economy. Lufkin and Nacogdoches are major regional centers of commercial and educational activity.



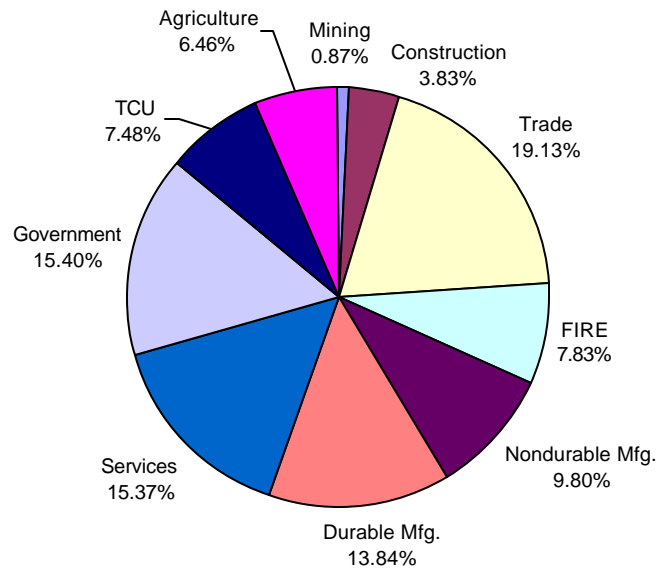
Deep East Texas COG Key Economic Indicators 1990-2000

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	305,680	356,710	1.56 %	16.70 %	2.08 %
Output (RGP-Real Gross Product)	\$4.21 bil	\$5.72 bil	3.11 %	35.90 %	4.55 %
Wage & Salary Employment	93,980	117,080	2.22 %	24.57 %	2.87 %
Per Capita Personal Income	\$13,550	\$20,970	4.46 %	54.78 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					

Sectoral Composition of Wage and Salary Employment for the Deep East Texas Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
Deep East Texas Council of Governments 2000**



**Deep East Texas Council of Governments Region
Target Industry Clusters**

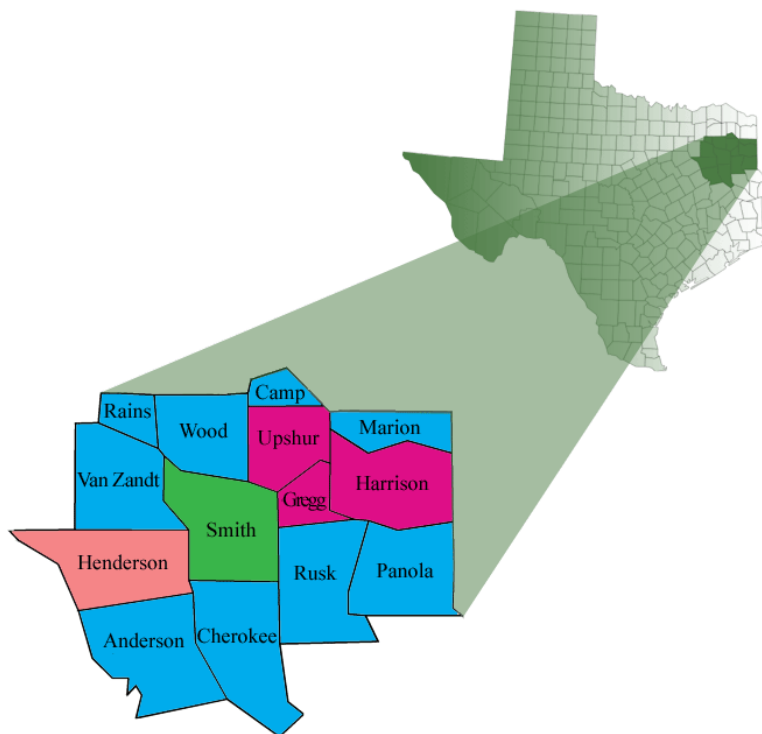
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



East Texas Council of Governments (COG) Region Profile and Target Clusters



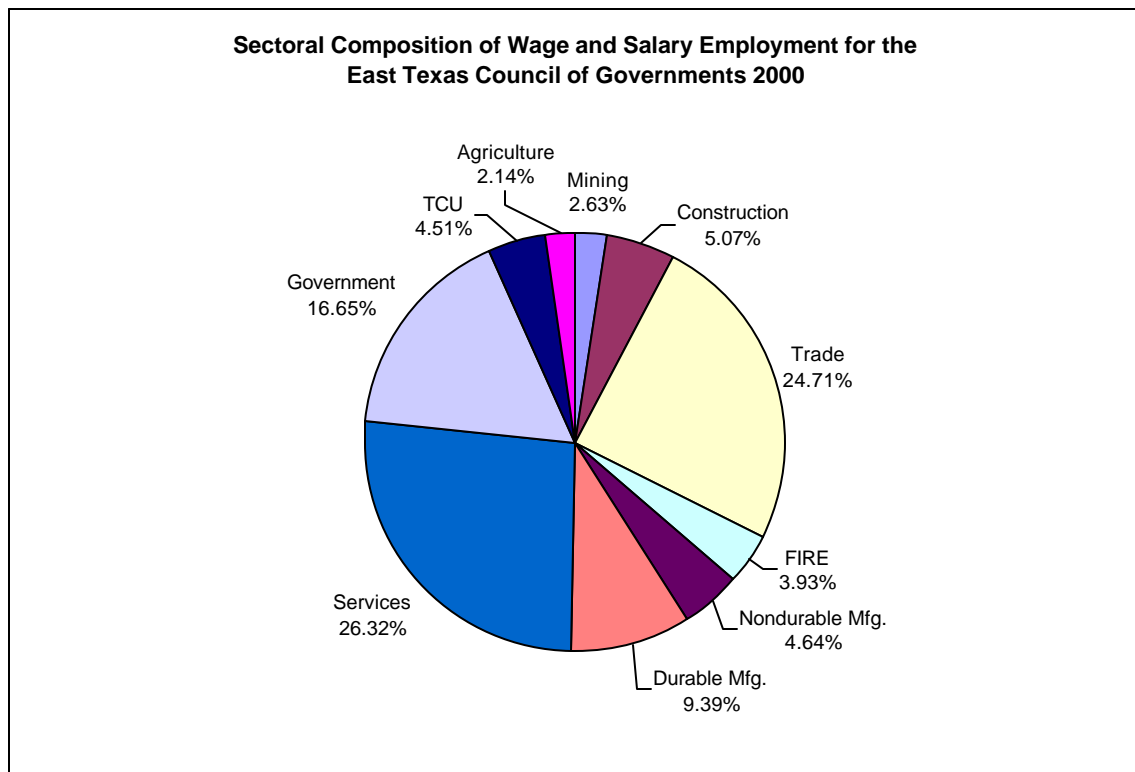
The Longview-Marshall and Tyler Metropolitan Statistical Areas (MSAs) and surrounding counties (Anderson, Camp, Cherokee, Gregg, Harrison, Henderson, Marion, Panola, Rains, Rusk, Smith, Upshur, Van Zandt, and Wood counties) comprise the East Texas COG Region.

Located on the rolling East Texas oil fields, oil and gas mining and processing are significant contributors to the economy. Other important elements include healthcare, lumber, tourism, and other agribusiness.

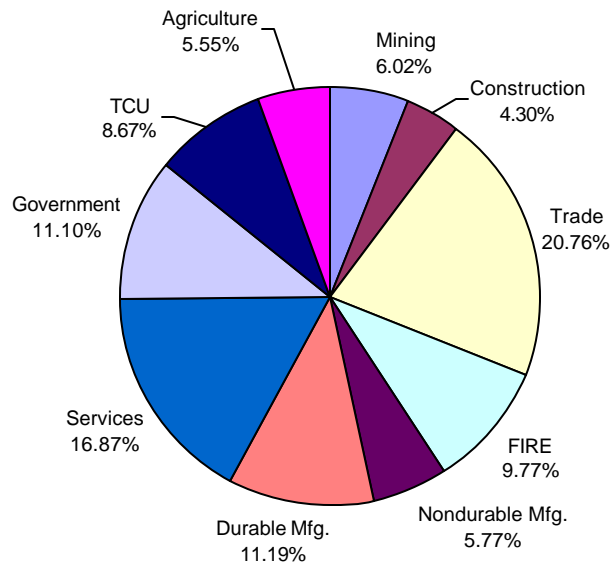
The trade and services sectors are the largest components of the economy of the Longview-Marshall MSA, with their combined total approaching nearly 60% of the area's jobs. The Tyler metro area, widely known as the "Rose Capital of the World," is a major administrative center for oil production. Services, trade, government, and manufacturing provide more than 80% of the economic base.



East Texas COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	653,090	746,790	1.35 %	14.35 %	2.08 %
Output (RGP-Real Gross Product)	\$11.43 bil	\$15.35 bil	2.99 %	34.29 %	4.55%
Wage & Salary Employment	229,070	290,190	2.39 %	26.68 %	2.87 %
Per Capita Personal Income	\$15,070	\$23,000	4.32 %	52.62 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
East Texas Council of Governments 2000**



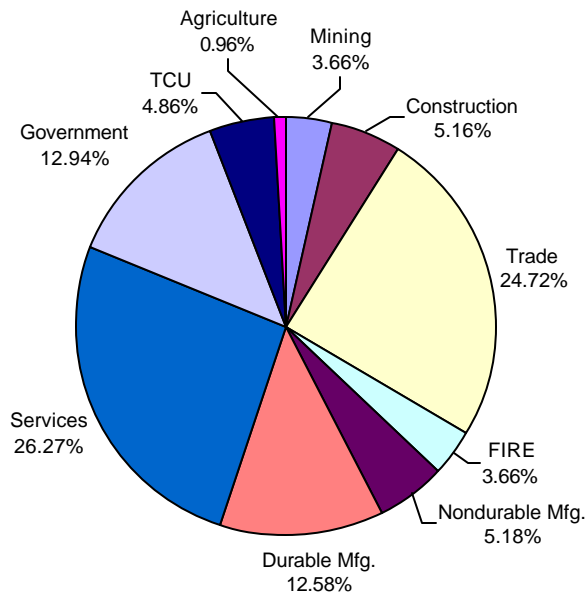
**Longview-Marshall MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	193,920	208,800	0.7 %	7.7 %	2.1 %
Output (RGP-Real Gross Product)	\$4.16 bil	\$4.96 bil	1.8 %	19.4 %	4.5 %
Wage & Salary Employment	79,300	99,450	2.3 %	25.4 %	2.9 %
Per Capita Personal Income	\$15,770	\$23,990	4.3 %	52.1 %	4.8 %

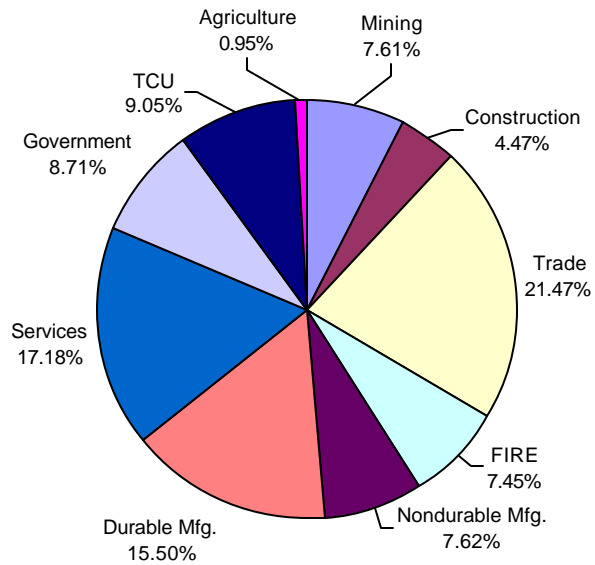
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Longview-Marshall MSA 2000**



**Sectoral Composition of Real Gross Product for the
Longview-Marshall MSA 2000**

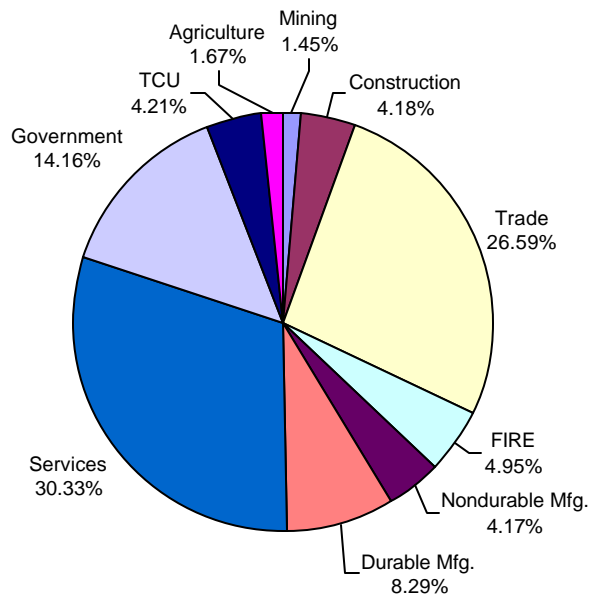


Tyler MSA Key Economic Indicators 1990-2000

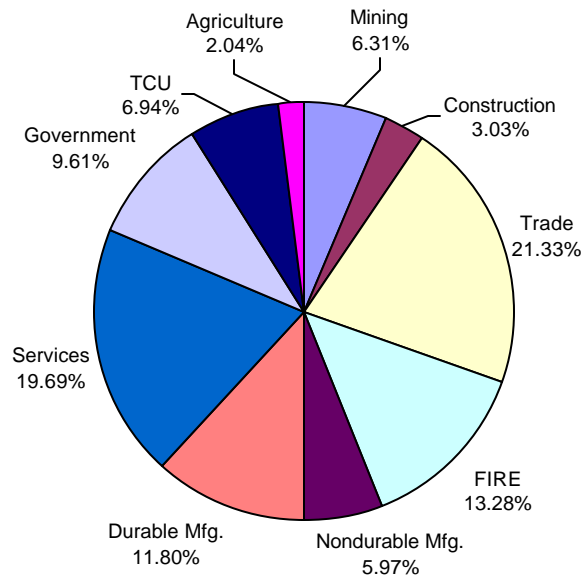
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	151,550	175,420	1.5 %	15.7 %	2.1 %
Output (RGP-Real Gross Product)	\$3.47 bil	\$5.16 bil	4.1 %	48.8 %	4.5 %
Wage & Salary Employment	67,410	89,240	2.8 %	32.4 %	2.9 %
Per Capita Personal Income	\$17,350	\$27,420	4.7 %	58.0 %	4.8 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the Tyler MSA 2000



**Sectoral Composition of Real Gross Product for the
Tyler MSA 2000**



**East Texas Council of Governments Region
Target Industry Clusters**

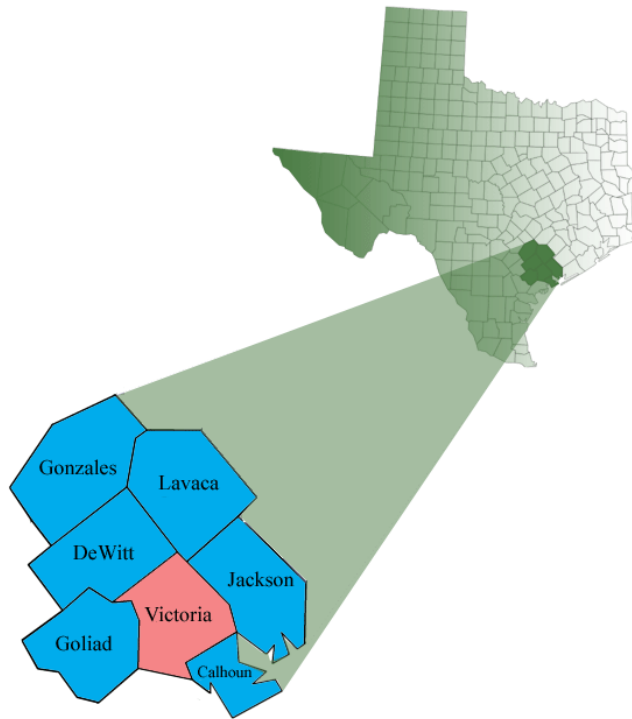
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Transportation Equipment Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



Golden Crescent Council of Governments (COG) Region Profile and Target Clusters

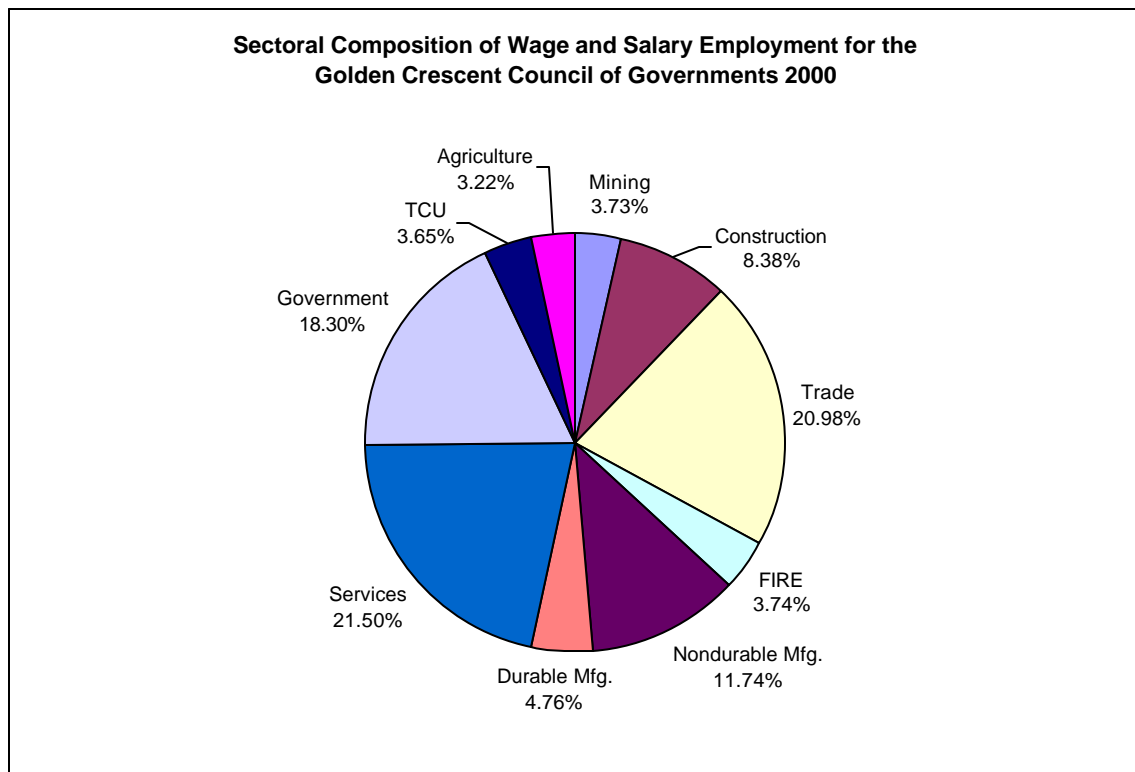


The Golden Crescent COG is comprised of the Victoria MSA and the surrounding area (Calhoun, DeWitt, Goliad, Gonzales, Jackson, Lavaca, and Victoria counties).

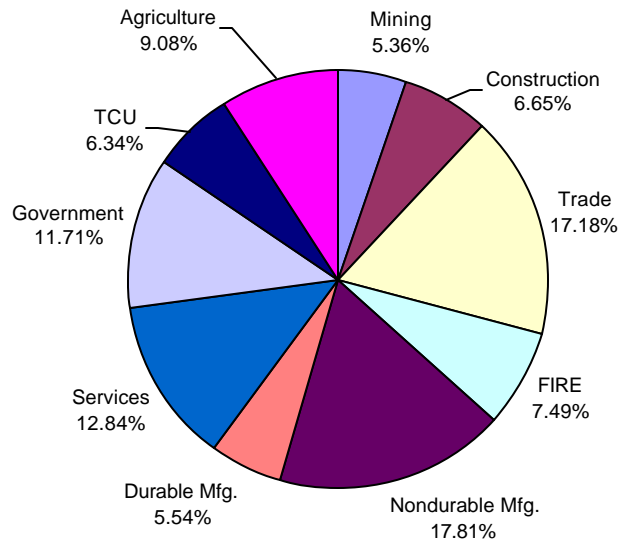
Oil and gas production and related activity are a major driver of the regional economy. In addition, government services, agribusiness, manufacturing, and tourism play significant roles in sustaining the economy of the area. Victoria serves as a major industrial and agricultural crossroads of South Texas. Services, trade, and government sectors provide nearly three-quarters of the job opportunities in the Victoria metro area.



Golden Crescent COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	167,220	183,990	0.96 %	10.03 %	2.08 %
Output (RGP-Real Gross Product)	\$3.21 bil	\$4.24 bil	2.81 %	31.87 %	4.55 %
Wage & Salary Employment	63,190	80,020	2.39 %	26.64 %	2.87 %
Per Capita Personal Income	\$15,760	\$24,080	4.33 %	52.83 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Golden Crescent Council of Governments 2000**



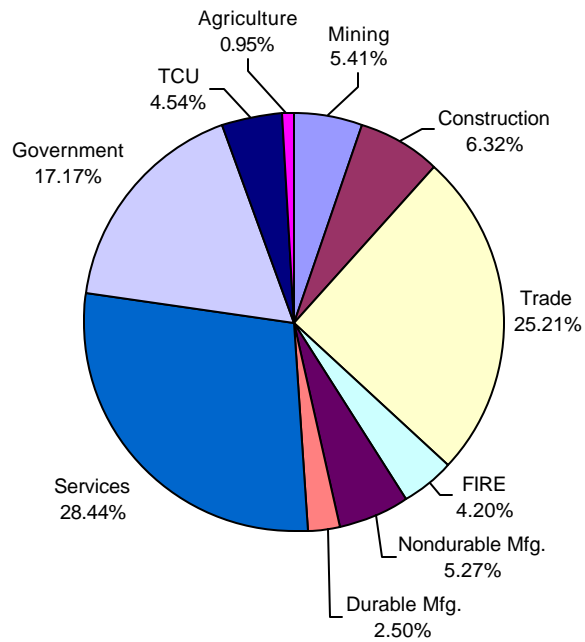
**Victoria MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	74,600	84,080	1.2 %	12.7 %	2.1 %
Output (RGP-Real Gross Product)	\$1.57 bil	\$1.97 bil	2.3 %	25.5 %	4.5 %
Wage & Salary Employment	30,370	39,780	2.7 %	31.0 %	2.9 %
Per Capita Personal Income	\$17,670	\$26,530	4.1 %	50.2 %	4.8 %

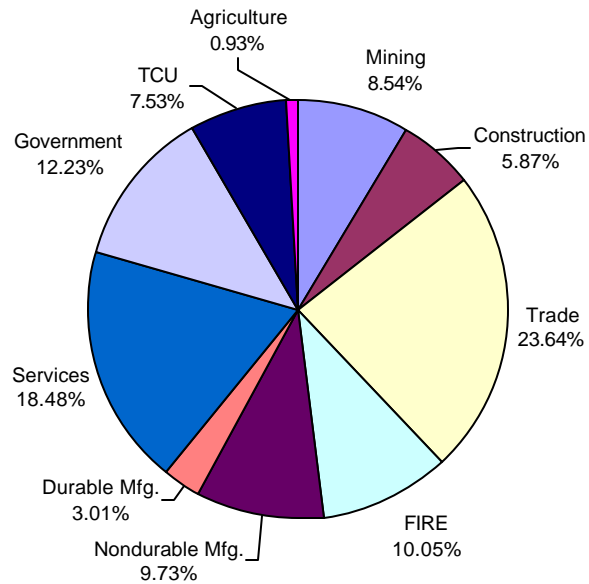
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Victoria MSA 2000**



**Sectoral Composition of Real Gross Product for the
Victoria MSA 2000**

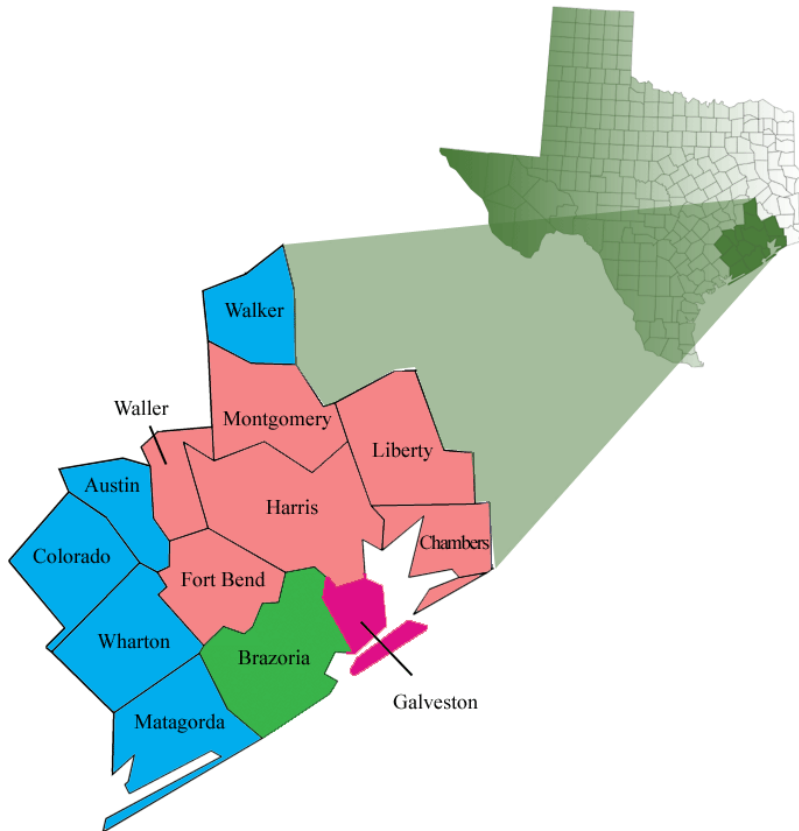


Golden Crescent Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Gulf Coast Council of Governments (COG) Region Profile and Target Clusters



The Houston, Galveston-Texas City, and Brazoria Primary Metropolitan Statistical Areas (PMSAs) and the surrounding counties (Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton) comprise the Gulf Coast COG Region. The highly industrialized area has the largest concentration of petrochemical plants in the US.

Among the major manufacturing entities are petroleum refining, fabricated metal products, non-electrical machinery, paper and allied products, and cement production. Business diversity has increased over the past several years and has greatly benefited this area and significantly strengthened its economic foundation.

Houston, the fourth most populous city in the US, is home to the world's largest medical center, the second largest American port, and the main training facility for the nation's astronauts. The area is a major center for energy, space, and medical research. The services and trade industries account for more than half of the jobs in the Houston metro area. Within the Houston PMSA are some 55



foreign consulates, and more than 90 languages are represented by the mother tongues of the area's residents.

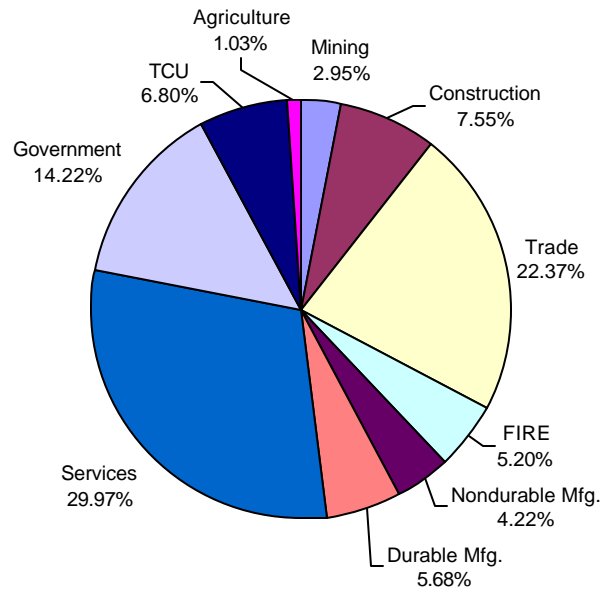
The Brazoria PMSA is comprised of two economically distinct regions. The northern section is characterized by agribusiness, petrochemical processing, and chemical production. The nine-city area in the southern section features one of the world's largest chemical complexes. Deepwater seaport activities, especially commercial fishing, also make significant contributions to the area's economy.

Although business operations of the Galveston-Texas City metro area are continually diversifying, port-related activities remain highly significant to the economy. Galveston Island is a major base of operations for offshore gas and oil suppliers, and the Port of Texas City is the largest private petrochemical port in the US. Tourism, medical education, and oceanographic research also play key roles in sustaining the PMSA's economy.

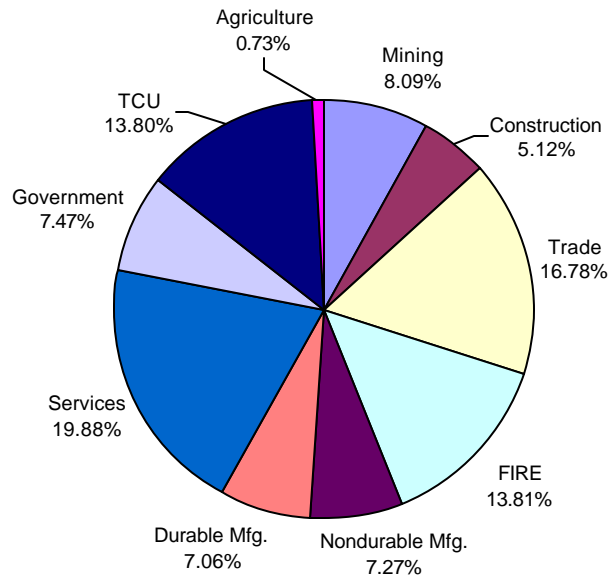
Gulf Coast COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	3,921,700	4,878,580	2.21 %	24.40 %	2.08 %
Output (RGP-Real Gross Product)	\$134.62 bil	\$197.83 bil	3.93 %	46.96 %	4.55 %
Wage & Salary Employment	1,887,130	2,431,000	2.56 %	28.82 %	2.87 %
Per Capita Personal Income	\$20,080	\$32,560	4.95 %	62.16 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



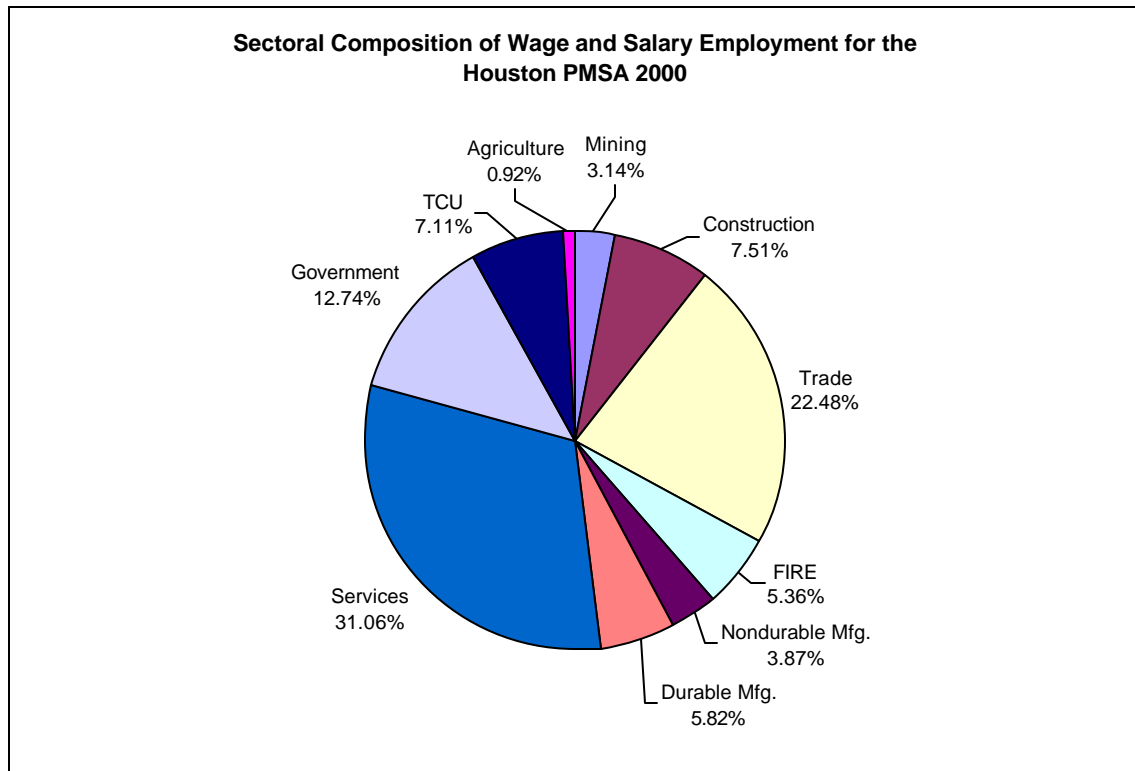
**Sectoral Composition of Wage and Salary Employment for the
Gulf Coast Council of Governments 2000**



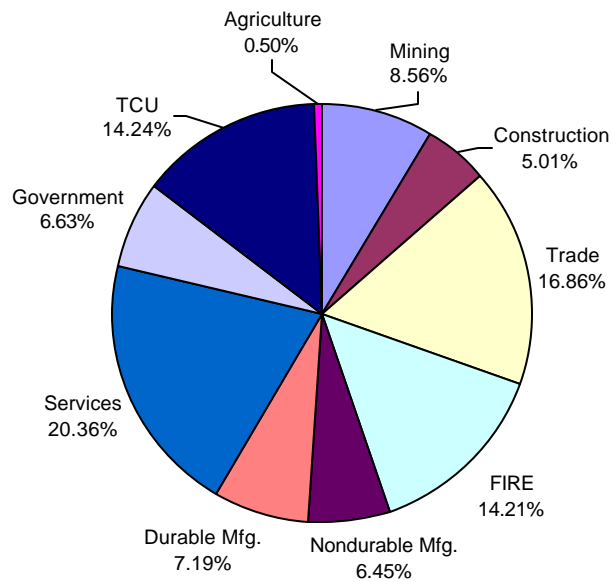
**Sectoral Composition of Real Gross Product for the
Gulf Coast Council of Governments 2000**



Houston PMSA Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	3,344,720	4,199,530	2.3 %	25.6 %	2.1 %
Output (RGP-Real Gross Product)	\$122.54 bil	\$184.34 bil	4.2 %	50.4 %	4.5 %
Wage & Salary Employment	1,675,810	2,188,130	2.7 %	30.6 %	2.9 %
Per Capita Personal Income	\$20,670	\$33,890	5.1 %	64.0 %	4.8 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Houston PMSA 2000**



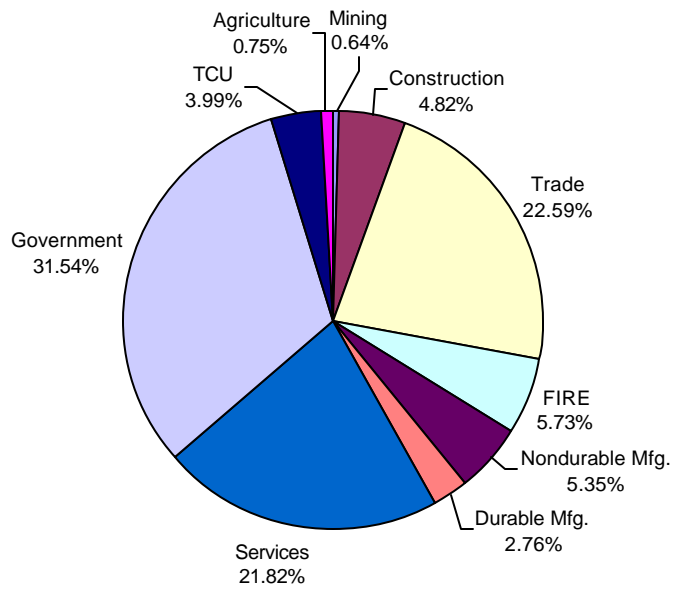
**Galveston-Texas City PMSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	218,360	250,720	1.4 %	14.8 %	2.1 %
Output (RGP-Real Gross Product)	\$4.44 bil	\$5.08 bil	1.4 %	14.4 %	4.5 %
Wage & Salary Employment	80,680	93,900	1.5 %	16.4 %	2.9 %
Per Capita Personal Income	\$17,970	\$26,560	4.0 %	47.8 %	4.8 %

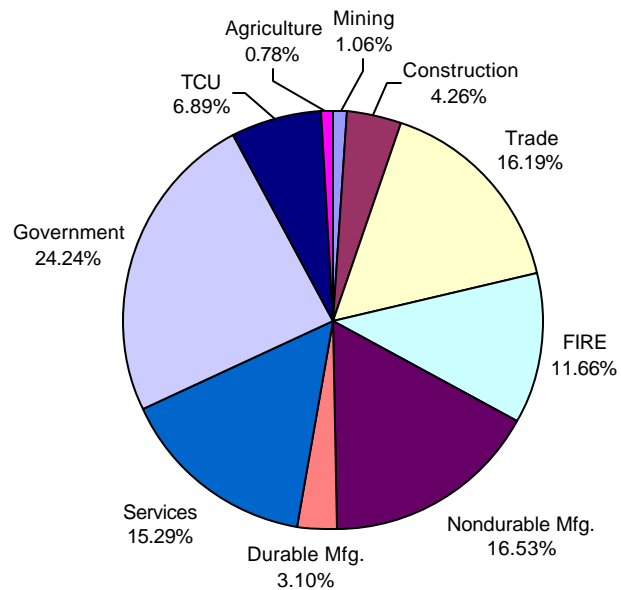
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



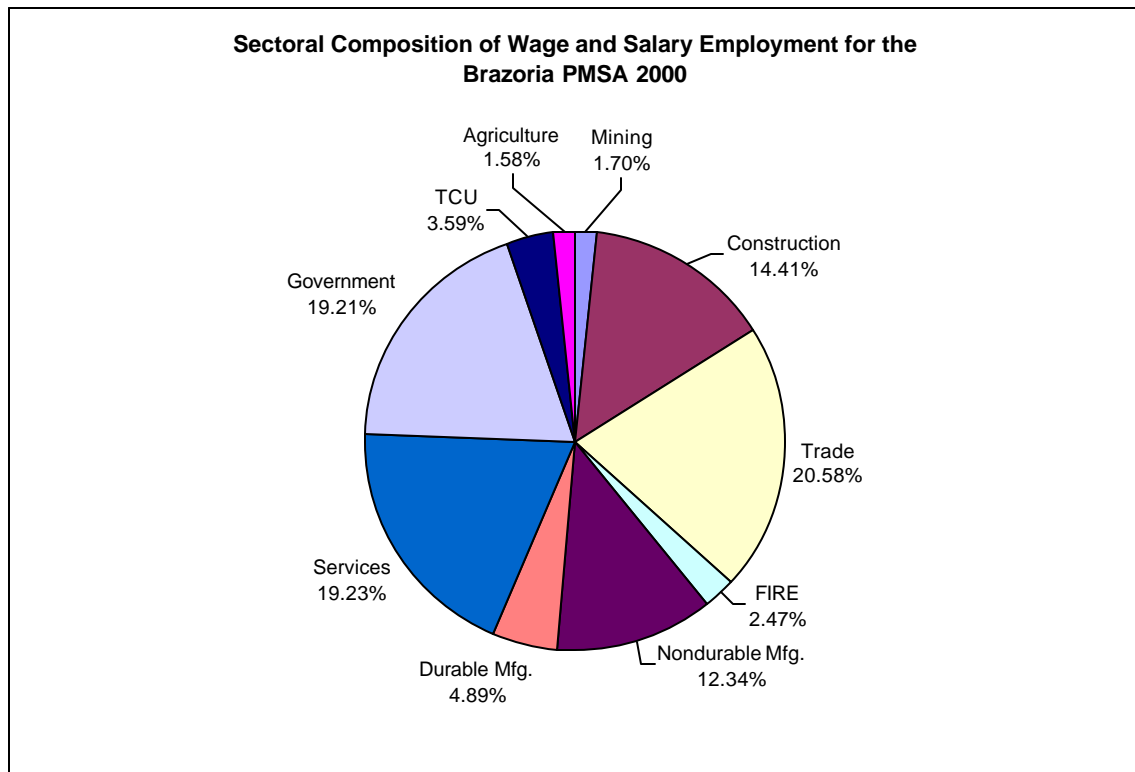
**Sectoral Composition of Wage and Salary Employment for the
Galveston-Texas City PMSA 2000**



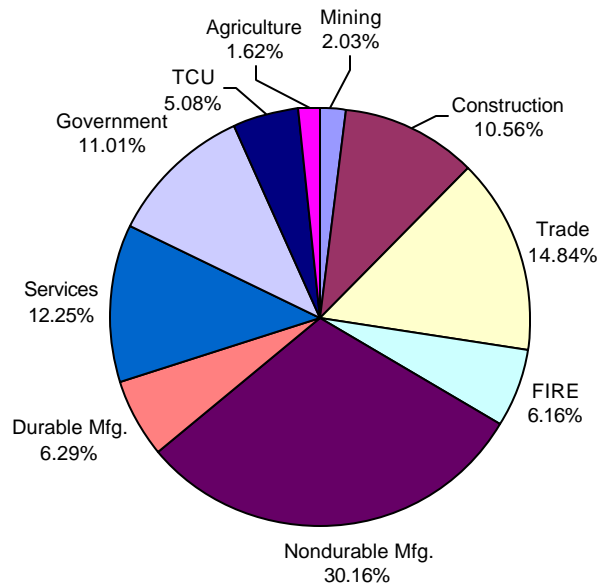
**Sectoral Composition of Real Gross Product for the
Galveston-Texas City PMSA 2000**



Brazoria PMSA Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	192,640	243,270	2.4 %	26.3 %	2.1 %
Output (RGP-Real Gross Product)	\$4.75 bil	\$4.95 bil	0.4 %	4.3 %	4.5 %
Wage & Salary Employment	71,450	81,310	1.3 %	13.8 %	2.9 %
Per Capita Personal Income	\$17,270	\$24,720	3.7 %	43.1 %	4.8 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Brazoria PMSA 2000**



**Gulf Coast Council of Governments Region
Target Industry Clusters**

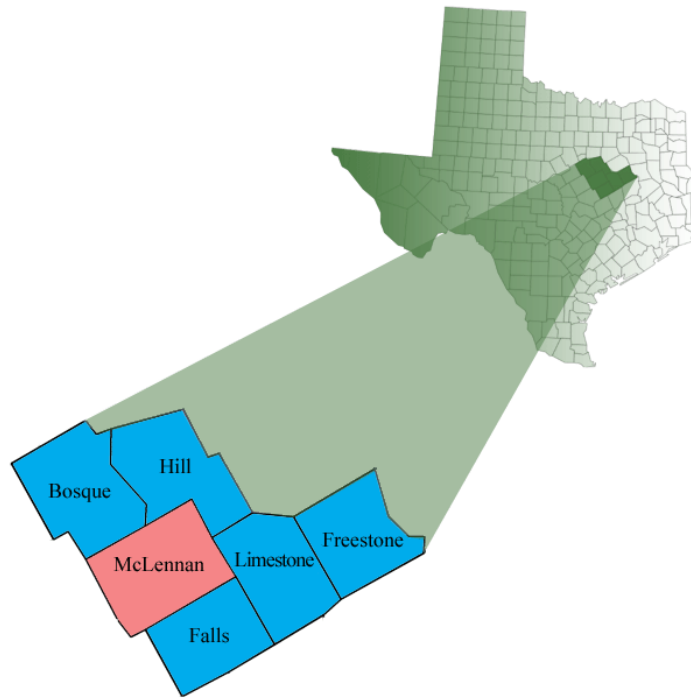
Emerging Biotechnology and Medical Cluster
Emerging Nanotechnology and Materials Cluster
Information Services Cluster
Applied Technology Cluster
Corporate Headquarters Cluster
Business Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Production Support Manufacturing Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



Heart of Texas Council of Governments (COG) Region Profile and Target Clusters

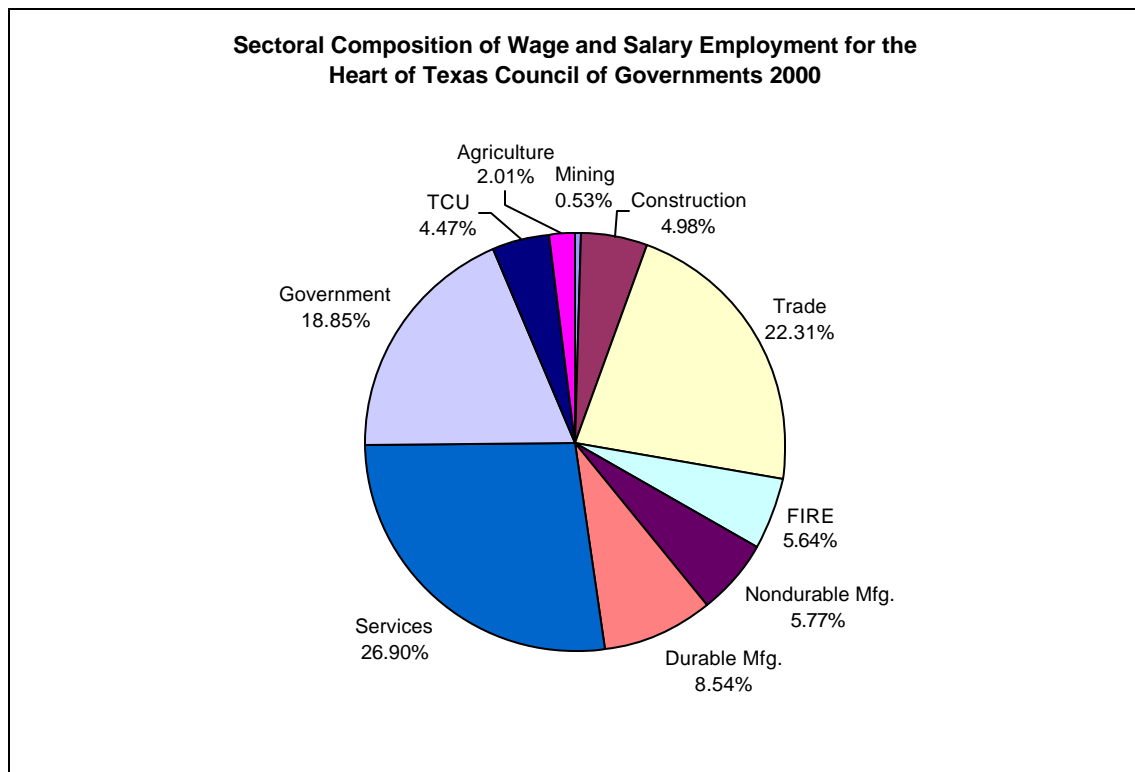


The Waco MSA and portions of the nearby area (Bosque, Falls, Freestone, Hill, Limestone, and McLennan counties) make up the Heart of Texas COG. In terms of output (Real Gross Product—RGP), the largest industrial sector in the area is finance, insurance, and real estate (FIRE). The area's wholesale and retail trade, services, government, and manufacturing segments are also drivers of the regional economy. A location along the heart of the I-35 corridor, the key route for trade between the US and Mexico, provides additional stimulus.

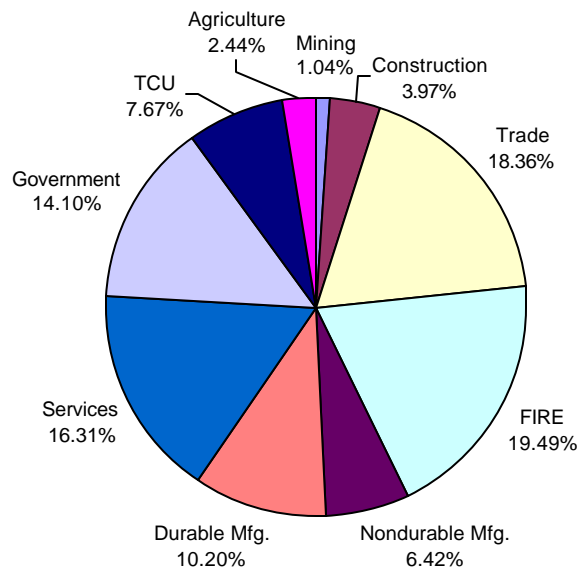
A notable economic strength of the Waco MSA is the education sector, as the area is home to Baylor University, McLennan Community College, and Texas State Technical College. Baylor provides more than \$1 billion to the economy annually. The manufacturing sector has a significant influence on the area's economic activity, and retail, business service providers, and home builders also measurably benefit the economy's health.



Heart of Texas COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	286,560	322,390	1.19 %	12.50 %	2.08 %
Output (RGP-Real Gross Product)	\$4.67 bil	\$6.79 bil	3.83 %	45.6 %	4.55 %
Wage & Salary Employment	107,420	136,100	2.39 %	26.7 %	2.87 %
Per Capita Personal Income	\$14,300	\$21,690	4.25 %	51.69 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Heart of Texas Council of Governments 2000**



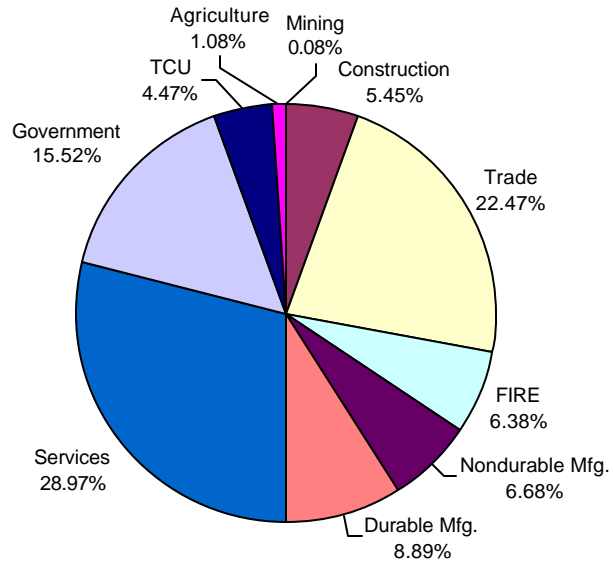
**Waco MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	189,740	214,040	1.2 %	12.8 %	2.1 %
Output (RGP-Real Gross Product)	\$3.55 bil	\$5.39 bil	4.3 %	51.9 %	4.5 %
Wage & Salary Employment	81,510	103,710	2.4 %	27.2 %	2.9 %
Per Capita Personal Income	\$14,900	\$22,880	4.4 %	53.5 %	4.8 %

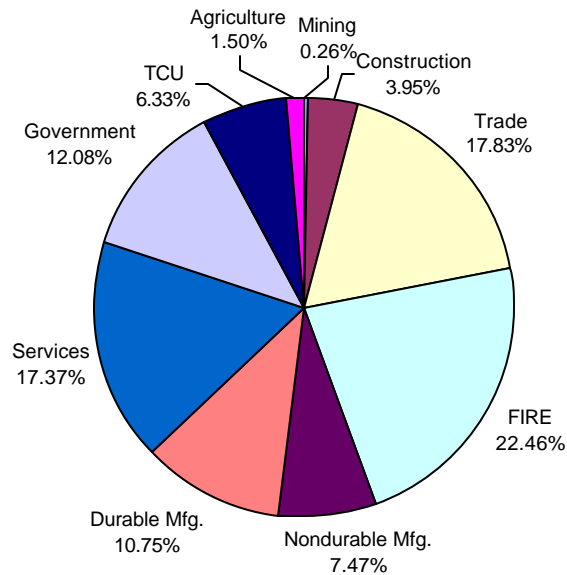
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Waco MSA 2000**



**Sectoral Composition of Real Gross Product for the
Waco MSA 2000**

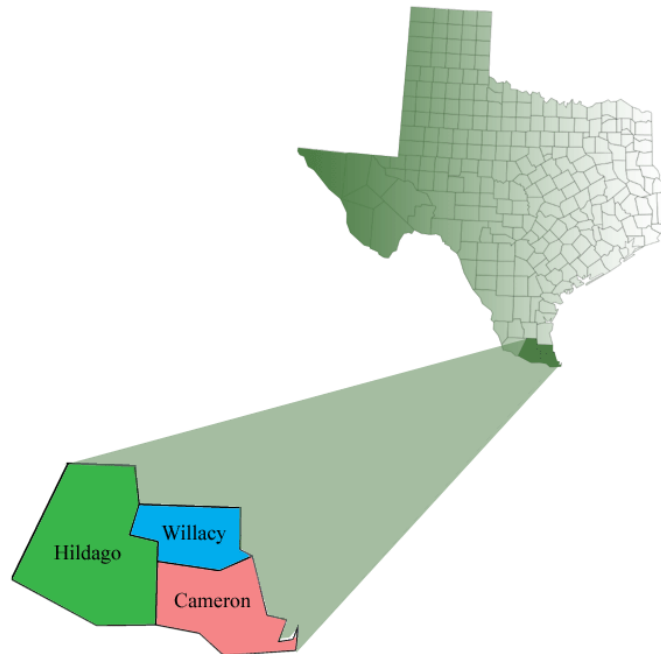


Heart of Texas Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Transportation Equipment Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Lower Rio Grande Council of Governments (COG) Region Profile and Target Clusters



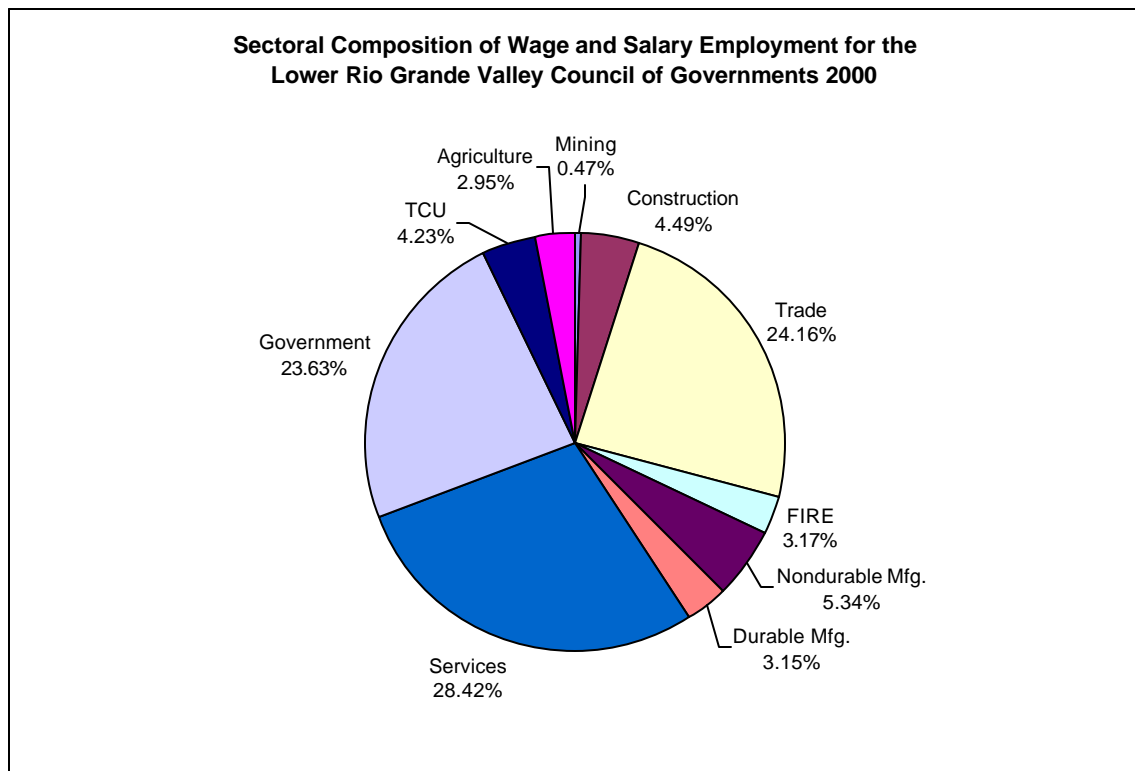
The Brownsville-Harlingen-San Benito and McAllen-Edinburg-Mission Metropolitan Statistical Areas (MSAs—Cameron and Hidalgo counties) as well as Willacy County comprise the Lower Rio Grande COG. Although plagued by perennially high unemployment and low relative per capita incomes, the region stands to gain from demographic trends over the decades to come. The area's relatively large number of young persons of workforce age can serve as a future competitive advantage in attracting desirable corporate locations provided adequate training programs can be implemented.

Over the period of the 1990s, business diversity continually increased with agribusiness, tourism, seafood processing, shipping, manufacturing, government, and services being the leading industries. Because of its location on the Texas-Mexico border, the area plays an important role in NAFTA-related international exchange and manufacturing.

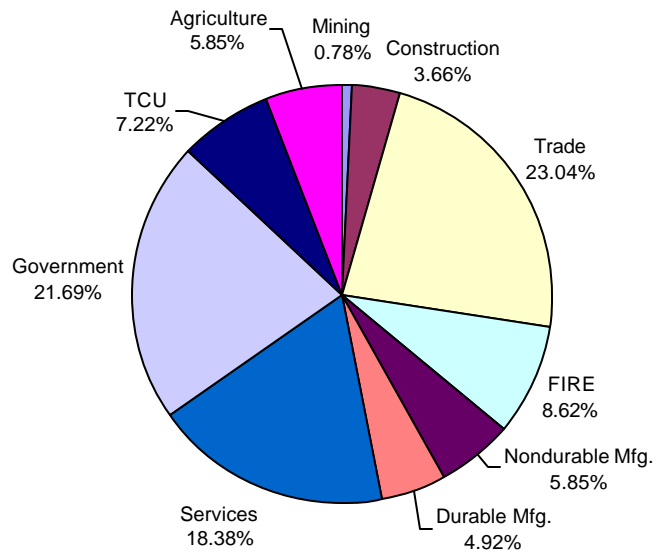
During the 1990s, the population of the Brownsville-Harlingen-San Benito MSA expanded by more than 28%. Its moderate climate and proximity to South Padre Island also attracts considerable numbers of tourists. The McAllen-Edinburg-Mission MSA is a prime winter resort site and retirement center.



Lower Rio Grande COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	666,630	930,990	3.40 %	39.66 %	2.08 %
Output (RGP-Real Gross Product)	\$7.56 bil	\$11.77 bil	4.53 %	55.7 %	4.55 %
Wage & Salary Employment	202,670	296,850	3.89 %	46.47 %	2.87 %
Per Capita Personal Income	\$9,520	\$13,910	3.87 %	46.12 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Lower Rio Grande Valley Council of Governments 2000**



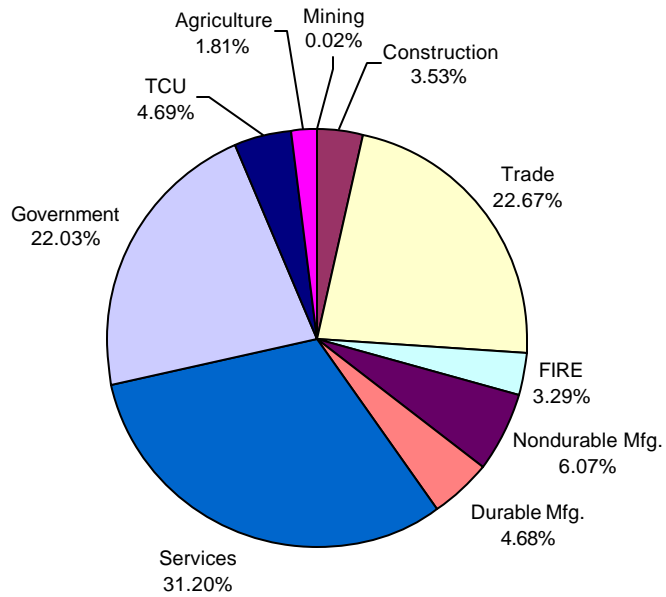
**Brownsville-Harlingen-San Benito MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	261,730	336,990	2.6 %	28.8 %	2.1 %
Output (RGP-Real Gross Product)	\$3.24 bil	\$4.65 bil	3.7 %	43.5 %	4.5 %
Wage & Salary Employment	84,890	118,880	3.4 %	40.0 %	2.9 %
Per Capita Personal Income	\$9,950	\$14,910	4.1 %	49.9 %	4.8 %

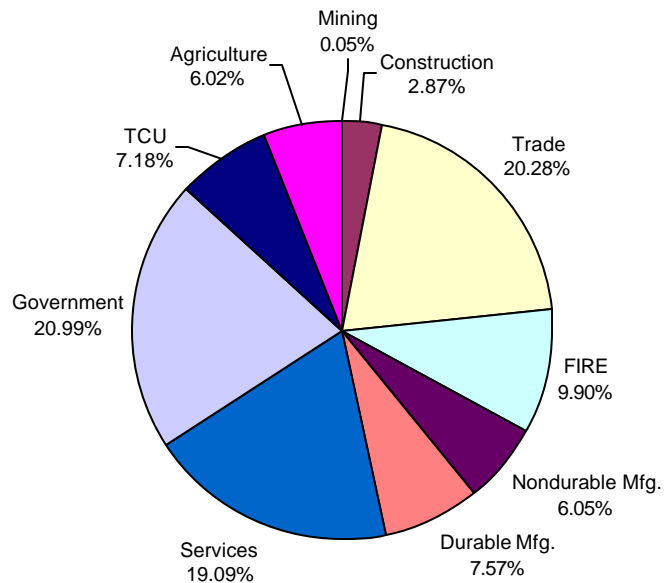
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



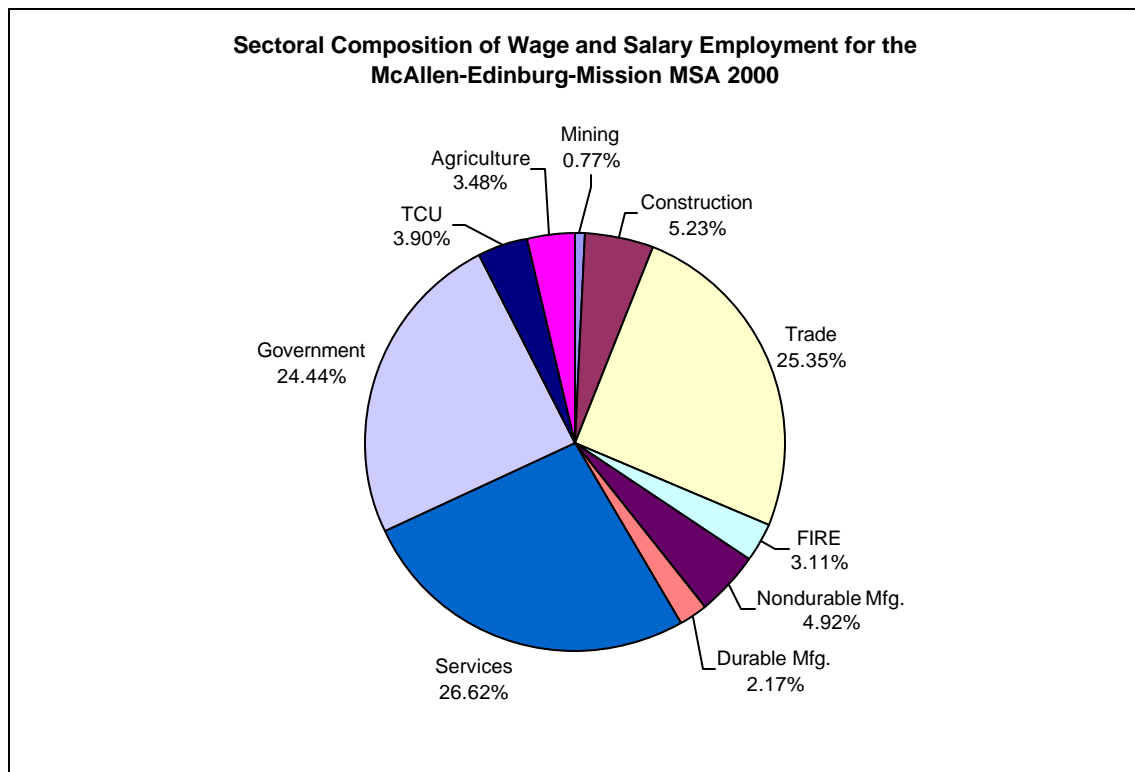
**Sectoral Composition of Wage and Salary Employment for the
Brownsville-Harlingen-San Benito MSA 2000**



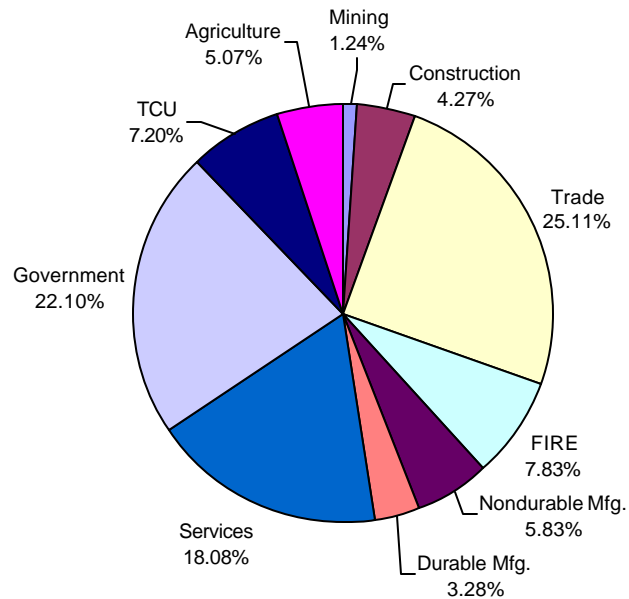
**Sectoral Composition of Real Gross Product for the
Brownsville-Harlingen-San Benito MSA 2000**



McAllen-Edinburg-Mission MSA Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	387,200	573,920	4.0 %	48.2 %	2.1 %
Output (RGP-Real Gross Product)	\$4.22 bil	\$6.94 bil	5.1 %	64.4 %	4.5 %
Wage & Salary Employment	114,270	173,840	4.3 %	52.1 %	2.9 %
Per Capita Personal Income	\$9,320	\$13,300	3.6 %	43.1 %	4.8 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
McAllen-Edinburg-Mission MSA 2000**



Lower Rio Grande Valley Council of Governments Region
Target Industry Clusters

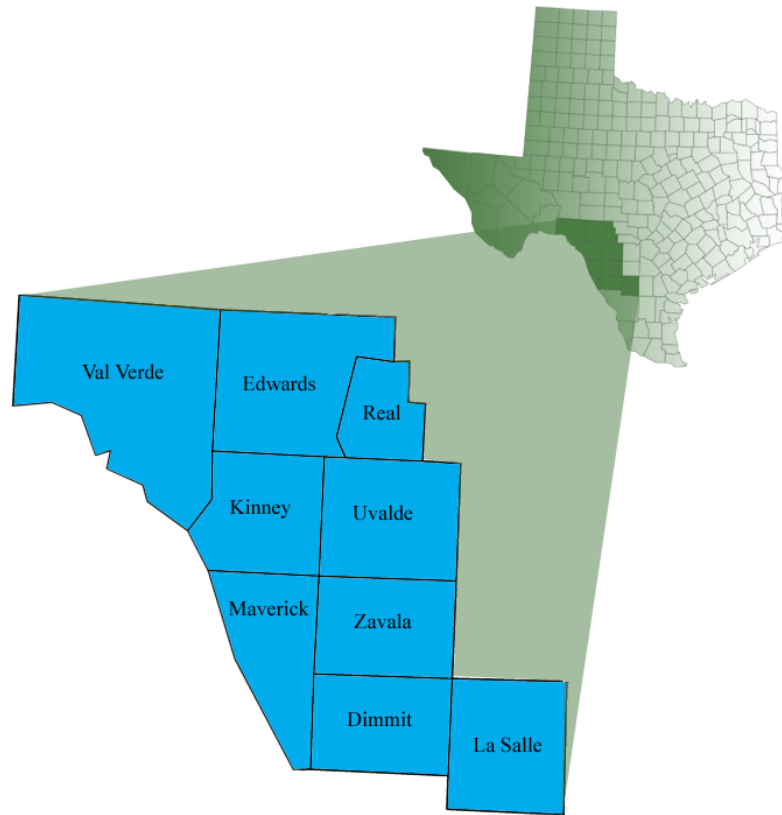
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Transportation Equipment Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



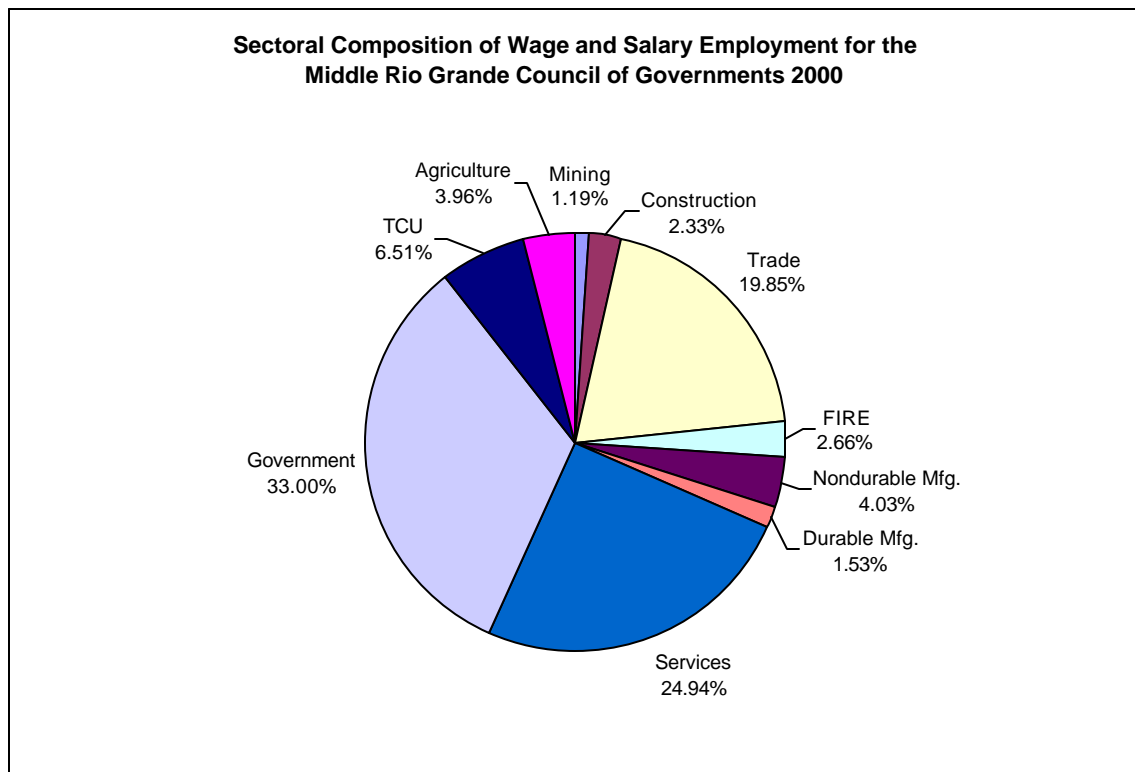
Middle Rio Grande Council of Governments (COG) Region Profile and Target Clusters



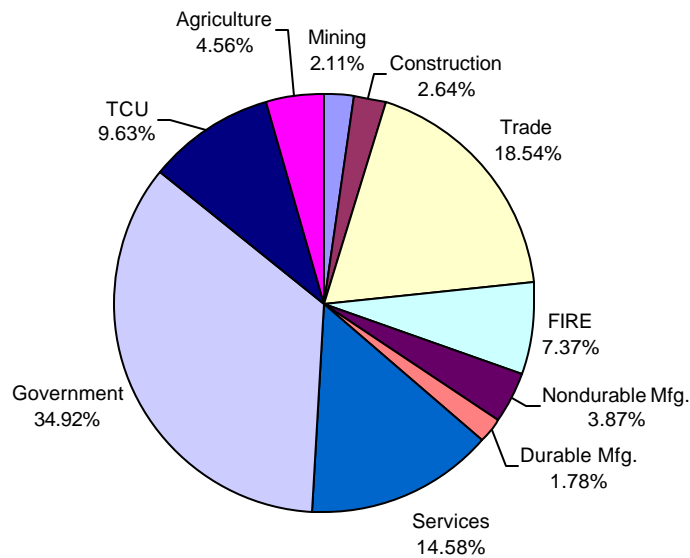
Dimmit, Edwards, Kinney, La Salle, Maverick, Real, Uvalde, Val Verde, Zavala counties comprise the Middle Rio Grande COG. Though relatively sparsely populated, the region saw employment growth over the decade of the 1990s at rates well above most areas of the state. Future diversification is critical to sustainable growth in this region, as is enhanced participation in NAFTA-related activities.



Middle Rio Grande COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR 1990-2000
Population	134,220	154,840	1.44 %	15.36	2.08 %
Output (RGP- Real Gross Product)	\$1.43 bil	\$1.85 bil	2.64 %	29.77 %	4.55 %
Wage & Salary Employment	37,610	48,970	2.67 %	30.2 %	2.87 %
Per Capita Personal Income	\$9,530	\$15,060	4.68 %	58.00 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Middle Rio Grande Council of Governments 2000**



**Middle Rio Grande Council of Governments Region
Target Industry Clusters**

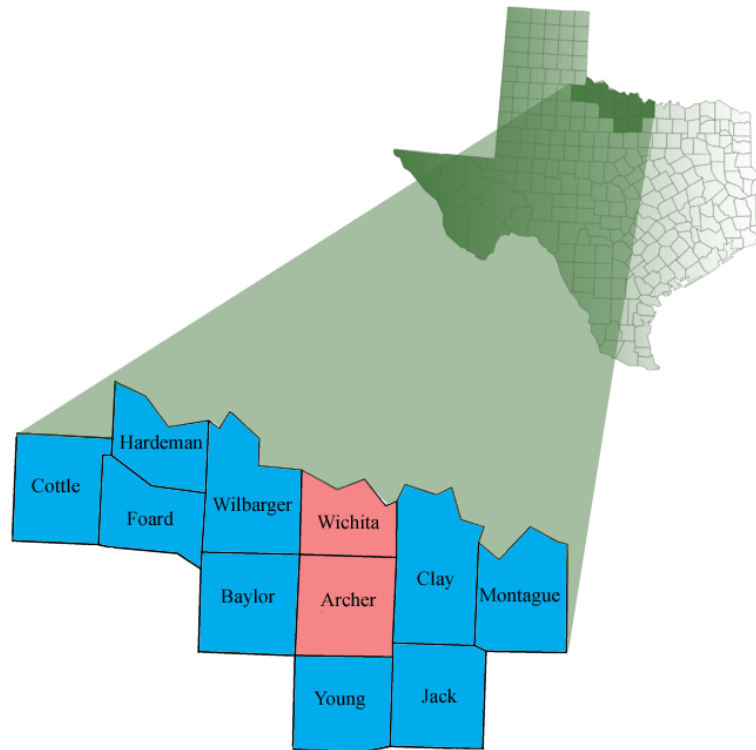
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Energy Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



North Texas Council of Governments (COG) Region Profile and Target Clusters



The Wichita Falls Metropolitan Statistical Area (MSA—Archer and Wichita counties) and surrounding counties (Baylor, Clay, Cottle, Foard, Hardeman, Jack, Montague, Wilbarger and Young) make up the North Texas COG.

The major industrial categories driving the economy are services, primarily health services provided by five hospitals; trade; and government, a significant portion of which is attributable to Sheppard Air Force Base. Numerous oil and gas-related businesses are located in the area as well as a variety of plastics manufacturing and industrial equipment manufacturing companies.

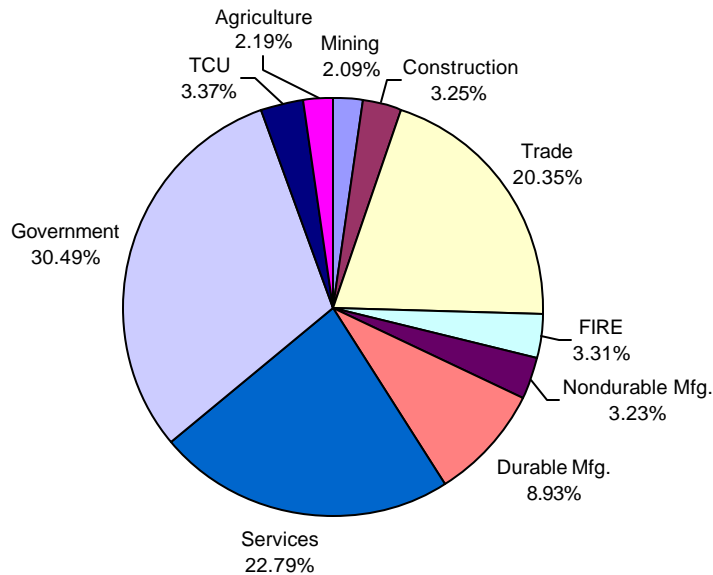


North Texas COG Key Economic Indicators 1990-2000

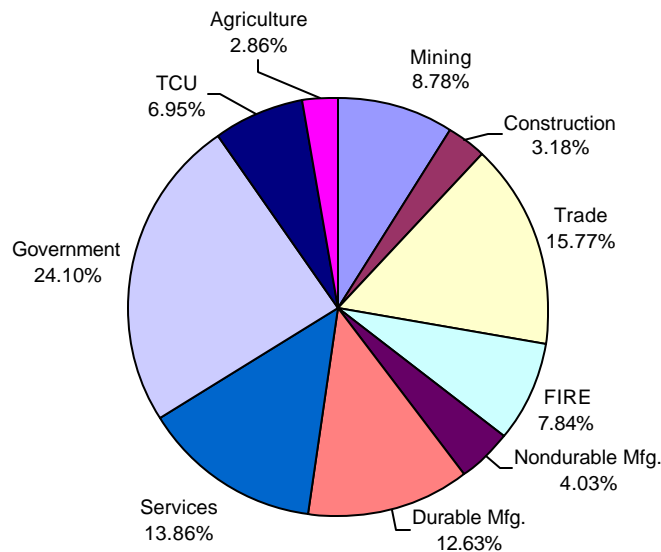
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR 1990-2000
Population	211,200	224,150	0.60 %	6.13 %	2.08 %
Output (RGP-Real Gross Product)	\$4.28 bil	\$4.79 bil	1.14 %	12.01 %	4.55 %
Wage & Salary Employment	87,870	98,290	1.13 %	11.86 %	2.87 %
Per Capita Personal Income	\$16,320	\$23,810	3.85 %	45.88 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the North Texas Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
North Texas Council of Governments 2000**



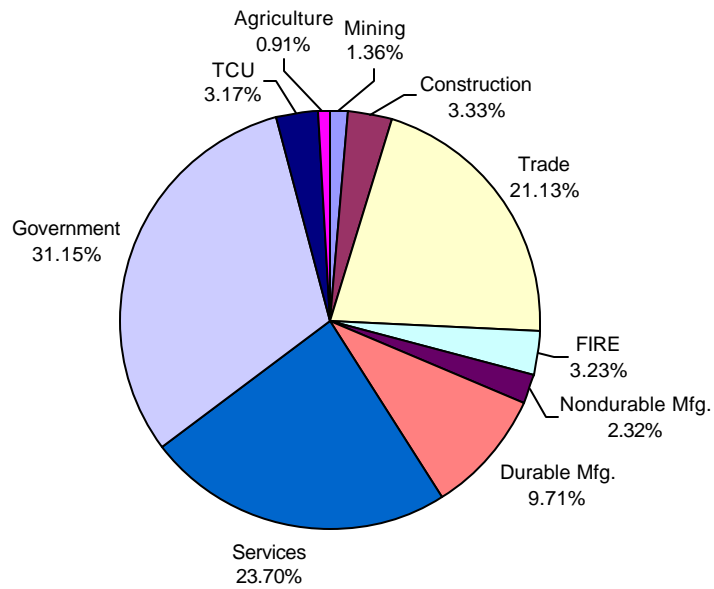
**Wichita Falls MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	130,300	140,330	0.7 %	7.7 %	2.1 %
Output (RGP-Real Gross Product)	\$2.95 bil	\$3.47 bil	1.7 %	17.8 %	4.5 %
Wage & Salary Employment	61,580	70,850	1.4 %	15.0 %	2.9 %
Per Capita Personal Income	\$16,990	\$25,210	4.0 %	48.3 %	4.8 %

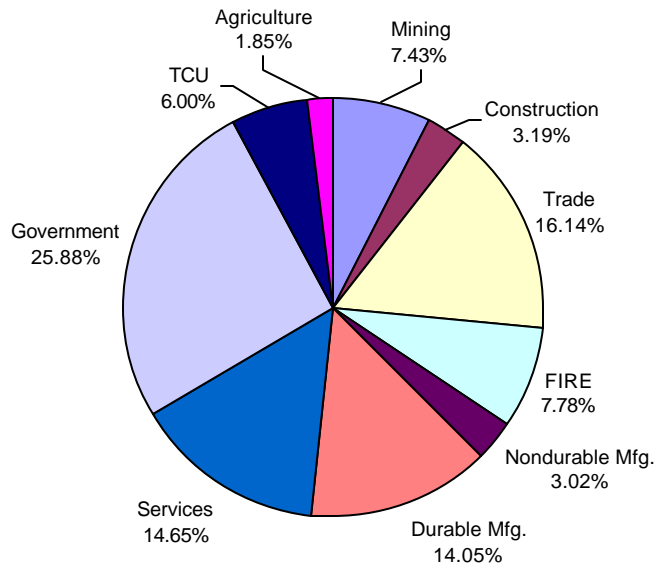
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Wichita Falls MSA 2000**



**Sectoral Composition of Real Gross Product for the
Wichita Falls MSA 2000**



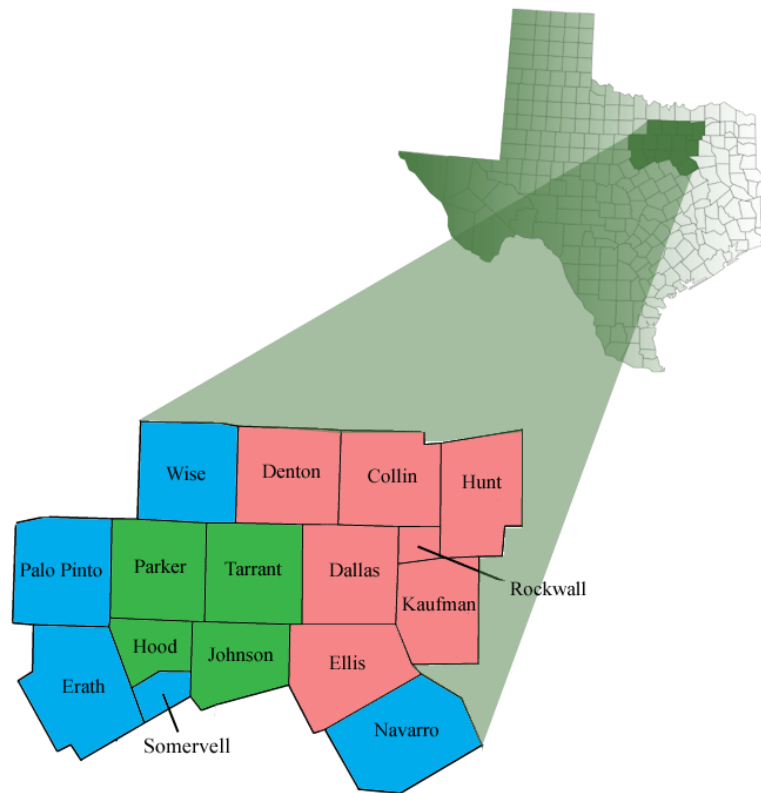
North Texas Council of Governments Region
Target Industry Clusters
Electronics Cluster
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Transportation Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



North Central Texas Council of Governments (COG) Region Profile and Target Clusters



The Dallas and Fort Worth-Arlington Primary Metropolitan Statistical Areas (PMSAs—Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties) as well as Erath, Navarro, Palo Pinto, Somervell, and Wise counties, comprise the North Central Texas COG.

The region outperformed virtually every other part of Texas (the Austin-San Marcos area being the exception) through the decade of the 1990s. Driven by numerous factors, the expansion led to overall growth in output of almost 75%. While recent telecom and other high-tech slowdowns have taken a toll, the region remains one of the top performers in Texas and, in fact, the nation.

The Dallas metro area maintains a diversified economy ranging from business to entertainment and from the arts to sports. The PMSA is a national center for telecommunications, electronics manufacturing, data processing, and transportation with more than 140,000 companies operating in the area. Approximately 6,000 of these organizations have their corporate headquarters in the area. The fastest-growing industries in the metro area over the past few years have been those associated with technology, communications, banking, and professional and financial services. The area's healthcare centers are among the largest and most important in the country. The proximity of the Dallas/Fort Worth International Airport and the PMSA's location on the I-35

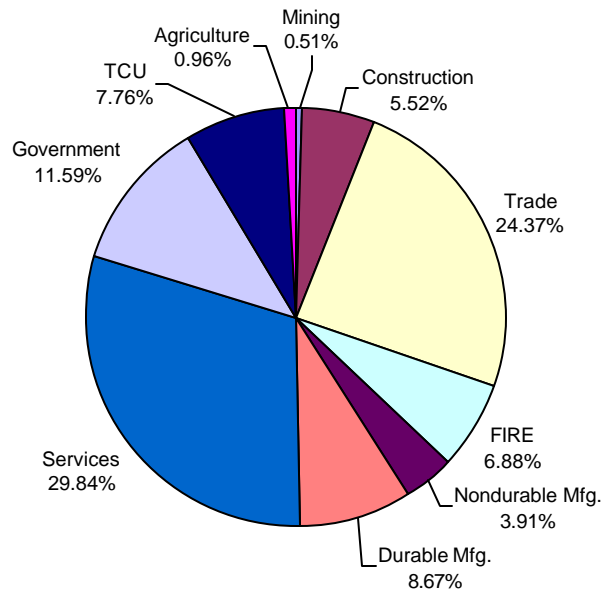


Corridor provide numerous opportunities for expansion. International business is a pivotal part of the economy, with trade relationships enhanced through activities involving the more than 25 foreign consulates in the area. Tourism is a significant industry with amusement parks, professional sports, and museums serving as major attractions.

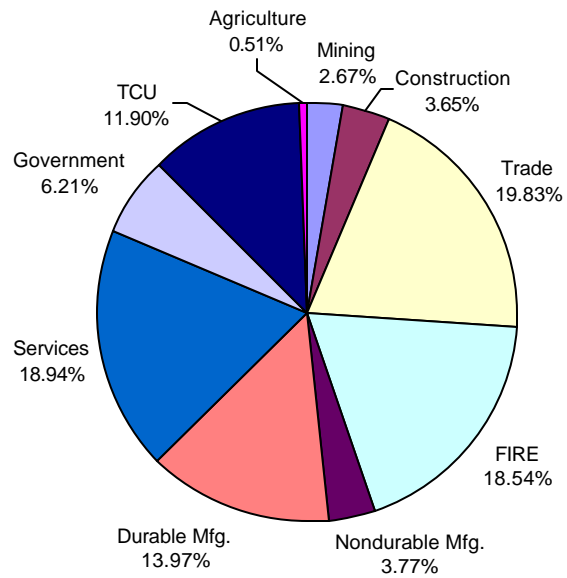
The Fort Worth-Arlington PMSA is a highly important manufacturing, commercial, and financial center. Its economy is greatly enhanced by the business activity generated through Alliance Airport and the I-35 NAFTA Corridor. The diversification of the region's economy is led by strong trade and transportation industries. New military contracts also bode well for the local aircraft sector, and numerous new distribution facilities are contributing to long-term growth.

North Central Texas COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	4,136,870	5,342,300	2.59 %	29.14 %	2.08 %
Output (RGP-Real Gross Product)	\$137.51 bil	\$239.86 bil	5.72 %	74.43 %	4.55 %
Wage & Salary Employment	2,125,970	2,947,680	3.32 %	38.65 %	2.87 %
Per Capita Personal Income	\$20,690	\$33,130	4.82 %	60.11 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					

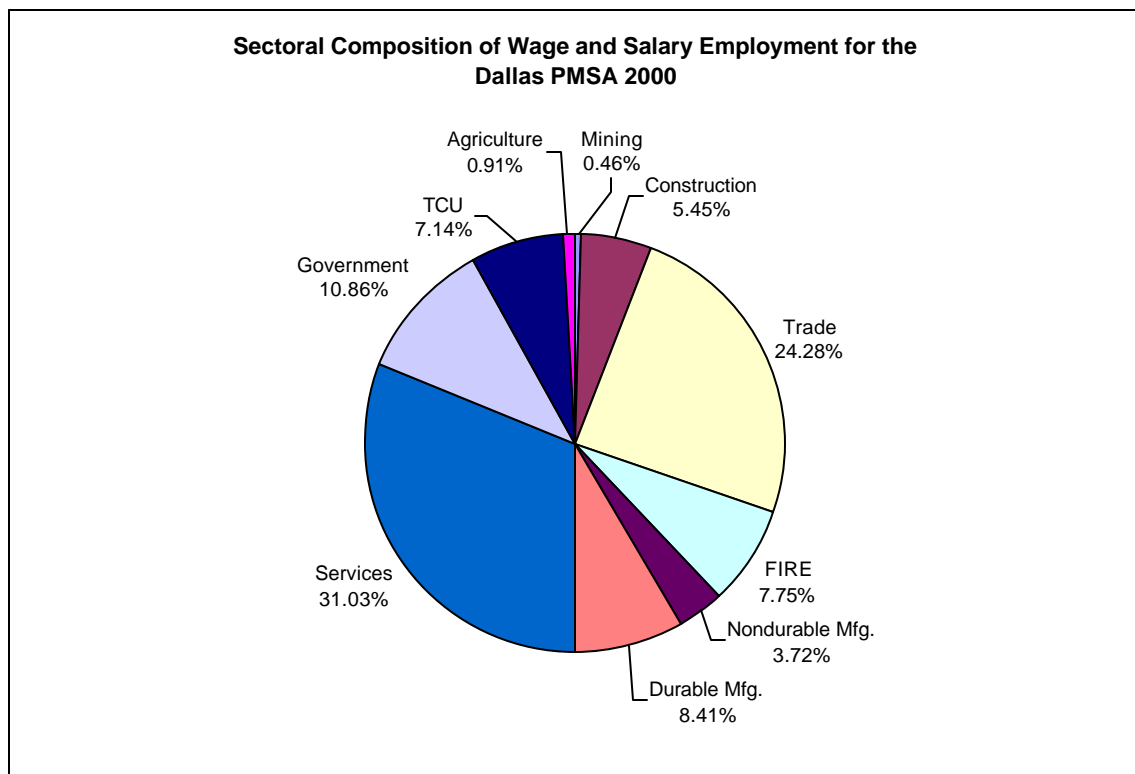
**Sectoral Composition of Wage and Salary Employment for the
North Central Texas Council of Governments 2000**



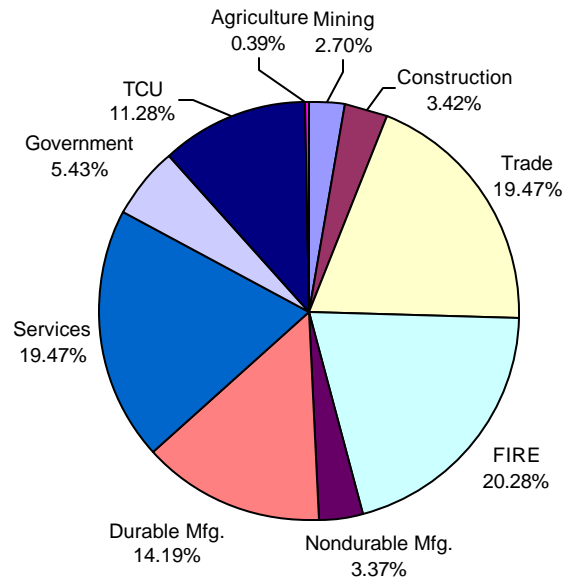
**Sectoral Composition of Real Gross Product for the
North Central Texas Council of Governments 2000**



Dallas PMSA Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	2,693,670	3,541,100	2.8 %	31.5 %	2.1 %
Output (RGP-Real Gross Product)	\$103.13 bil	\$185.20 bil	6.0 %	79.6 %	4.5 %
Wage & Salary Employment	1,478,880	2,089,940	3.5 %	41.3 %	2.9 %
Per Capita Personal Income	\$21,680	\$35,220	5.0 %	62.4 %	4.8 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Dallas PMSA 2000**



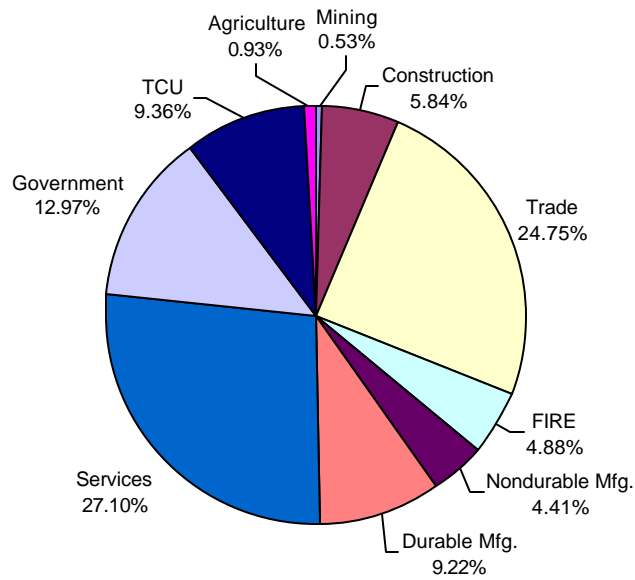
**Fort Worth-Arlington PMSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	1,368,700	1,713,120	2.3 %	25.2 %	2.1 %
Output (RGP-Real Gross Product)	\$32.67 bil	\$52.50 bil	4.9 %	60.7 %	4.5 %
Wage & Salary Employment	615,110	816,310	2.9 %	32.7 %	2.9 %
Per Capita Personal Income	\$19,050	\$29,300	4.4 %	53.8 %	4.8 %

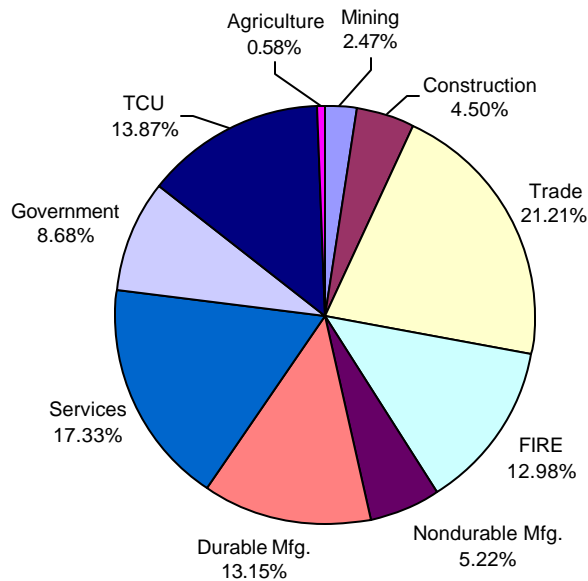
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Fort Worth-Arlington PMSA 2000**



**Sectoral Composition of Real Gross Product for the
Fort Worth-Arlington PMSA 2000**



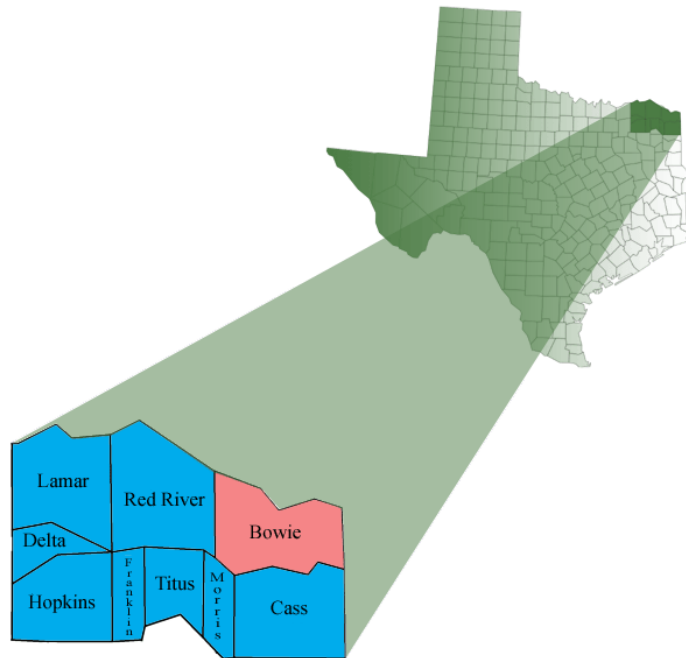
North Central Texas Council of Governments Region
Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Emerging Nanotechnology and Materials Cluster
Electronics Cluster
Information Services Cluster
Applied Technology Cluster
Corporate Headquarters Cluster
Business Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Energy Cluster
Transportation Equipment Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



North East Texas Council of Governments (COG) Region Profile and Target Clusters



The Texarkana Metropolitan Statistical Area (Bowie County) as well as Cass, Delta, Franklin, Hopkins, Lamar, Morris, Red River, and Titus counties comprise the North East Texas COG. With a relatively diverse economy, the area experienced modest growth through the decade of the 1990s. A higher-than-average concentration in manufacturing industries was a key aspect of regional stability. Lumber mills, paper processing, agribusiness, and metal manufacturing also made significant positive impacts. Services, trade, and government are the three major sectors in terms of employment in the Texarkana MSA.

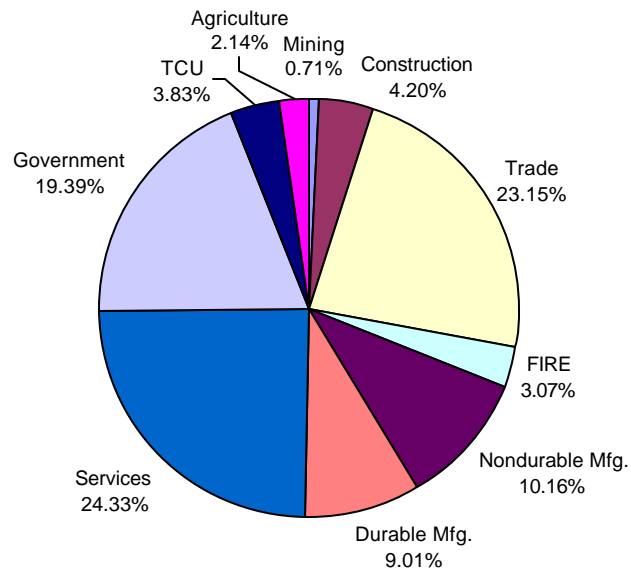


North East Texas COG Key Economic Indicators 1990-2000

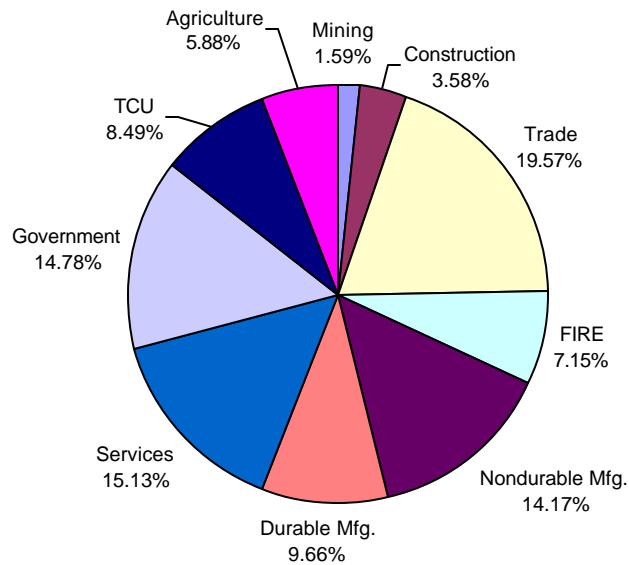
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	248,970	270,670	0.84 %	8.72 %	2.08 %
Output (RGP-Real Gross Product)	\$4.36 bil	\$5.64 bil	2.62 %	29.53 %	4.55 %
Wage & Salary Employment	94,610	113,610	1.85 %	20.08 %	2.87 %
Per Capita Personal Income	\$14,740	\$21,810	3.99 %	47.95 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the North East Texas Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
North East Texas Council of Governments 2000**



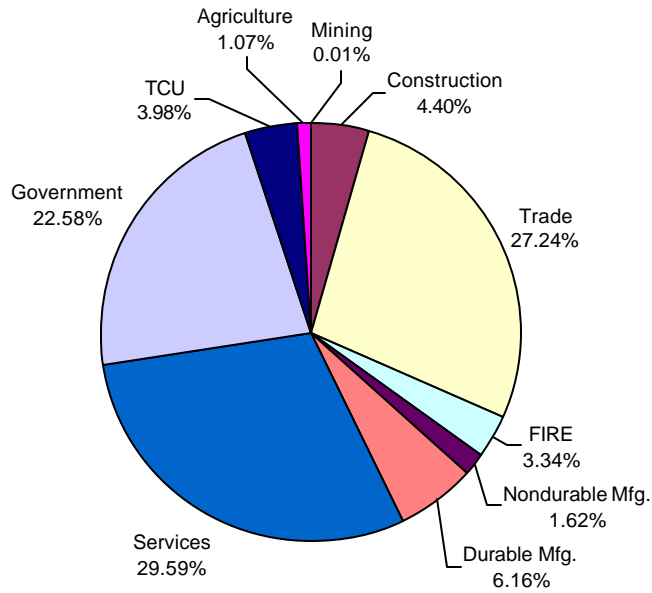
**Texarkana MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	81,990	89,300	0.9 %	8.9 %	2.1 %
Output (RGP-Real Gross Product)	\$1.56 bil	\$1.87 bil	1.8 %	19.6 %	4.5 %
Wage & Salary Employment	35,540	40,900	1.4 %	15.1 %	2.9 %
Per Capita Personal Income	\$15,860	\$22,390	3.5 %	41.2 %	4.8 %

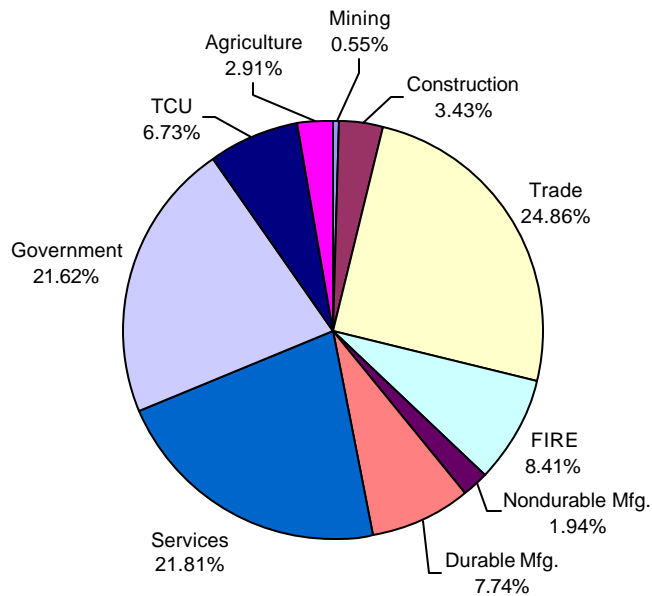
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Texarkana MSA 2000**



**Sectoral Composition of Real Gross Product for the
Texarkana MSA 2000**

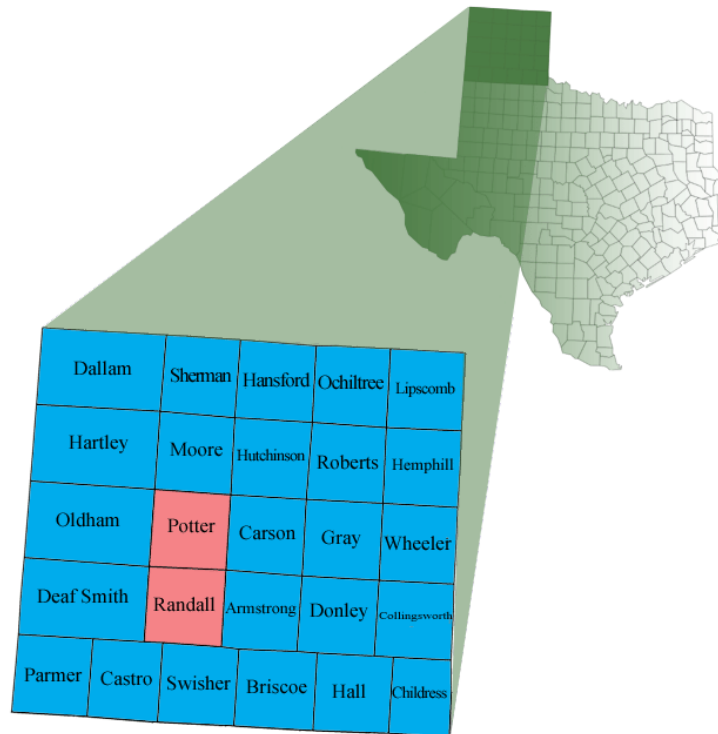


North East Texas Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Transportation Equipment Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Panhandle Council of Governments (COG) Region Profile and Target Clusters

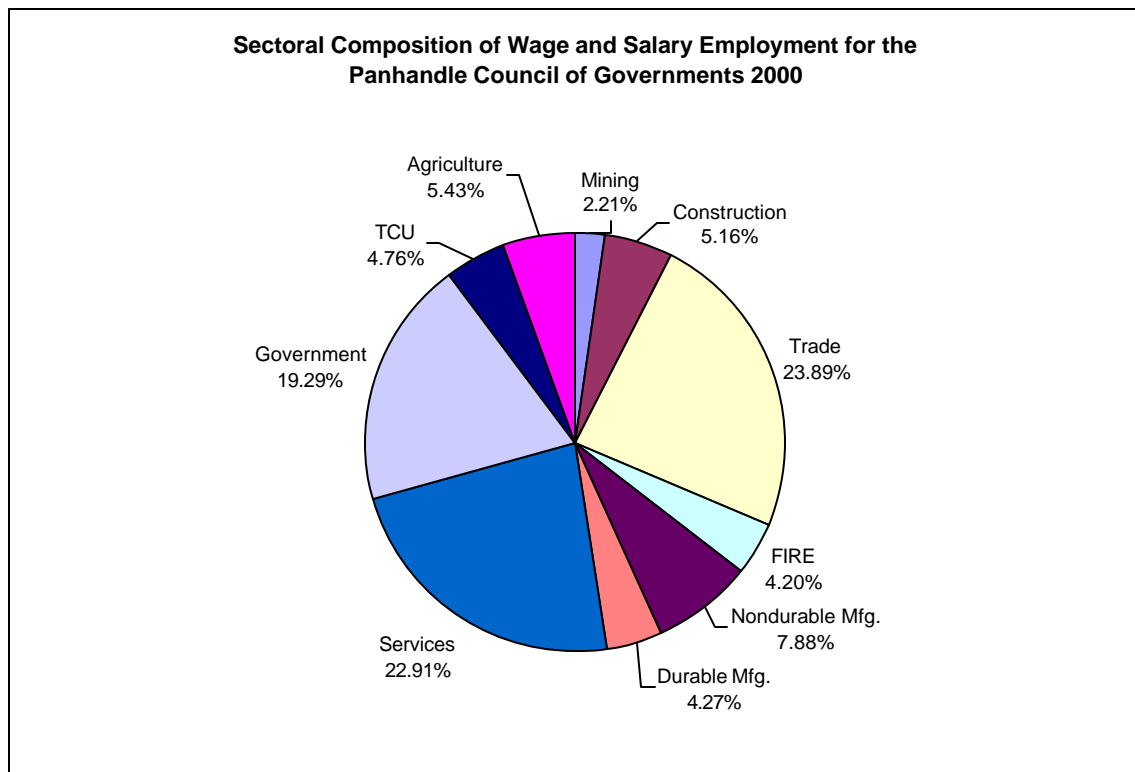


The Amarillo Metropolitan Statistical Area (Potter and Randall counties) as well as Armstrong, Briscoe, Carson, Castro, Childress, Collingsworth, Dallam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Sherman, Swisher, and Wheeler counties comprise the Panhandle COG. The Panhandle Region is a strongly agricultural area, with a substantial proportion of economic activity derived from both livestock and crops. Oil and gas activity is another important aspect of the Panhandle economic base.

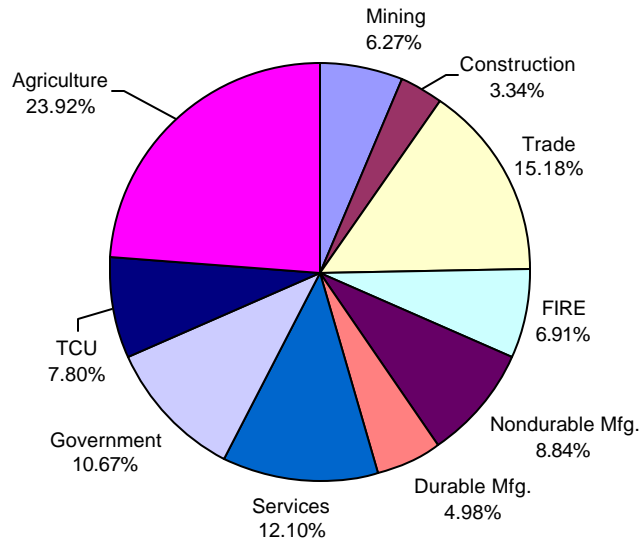
In the Amarillo MSA, services and trade support nearly 60% of employment, with government providing an additional 10%. Among the leading business operations are transportation, gas processing, petrochemicals, and agribusiness, along with a significant and growing number of manufacturing establishments. The Palo Duro Canyon State Park, which is located in this MSA, is a major attraction for tourism and an important element of the area's economy. Three major higher education institutions also play vital roles.



Panhandle COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	371,340	402,790	0.82 %	8.47 %	2.08 %
Output (RGP-Real Gross Product)	\$9.56 bil	\$11.68 bil	2.02 %	22.17 %	4.55 %
Wage & Salary Employment	151,100	177,770	1.64%	17.65 %	2.87 %
Per Capita Personal Income	\$17,650	\$25,300	3.66 %	43.23 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Panhandle Council of Governments 2000**



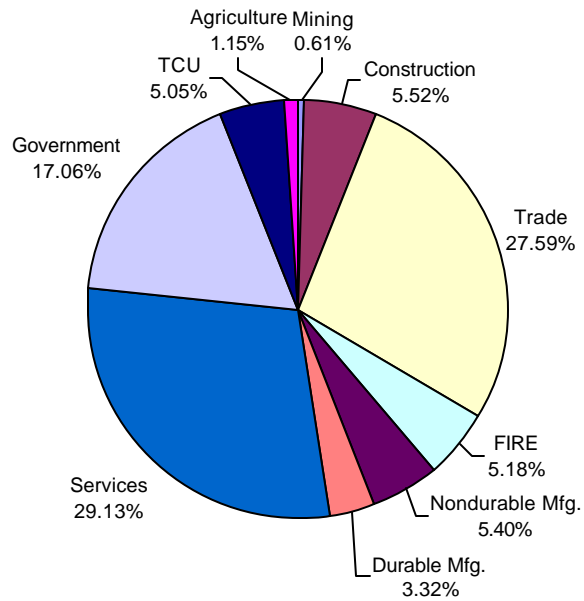
**Amarillo MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	187,640	218,320	1.5 %	16.3 %	2.1 %
Output (RGP-Real Gross Product)	\$4.33 bil	\$5.35 bil	2.1 %	23.6 %	4.5 %
Wage & Salary Employment	80,760	103,150	2.5 %	27.7 %	2.9 %
Per Capita Personal Income	\$16,850	\$24,430	3.8 %	45.0 %	4.8 %

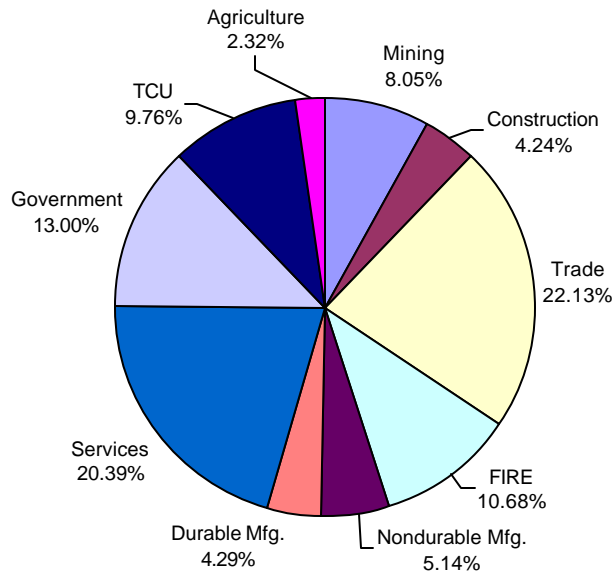
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Amarillo MSA 2000**



**Sectoral Composition of Real Gross Product for the
Amarillo MSA 2000**

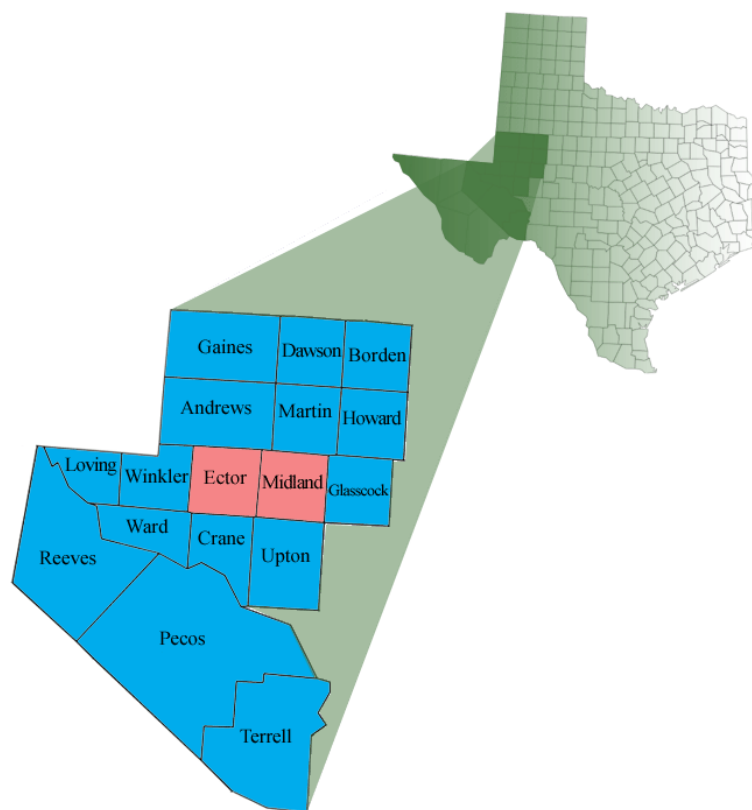


Panhandle Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Transportation Equipment Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Permian Basin Council of Governments (COG) Region Profile and Target Clusters



The Odessa-Midland Metropolitan Statistical Area (MSA—Ector and Midland counties) as well as Andrews, Borden, Crane, Dawson, Gaines, Glasscock, Howard, Loving, Martin, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties comprise the Permian Basin COG. The Permian Basin area economy is supported by oil and gas-related activity; agriculture and transportation are other important drivers of business activity. The area experienced modest employment growth through the decade of the 1990s.

The Odessa-Midland area is a major distribution and administration hub for the oil industry and is a highly significant center for Permian Basin oil field operations. It has the largest percentage of mining employment of any MSA in the Lone Star State. Other important contributors to the area's economy include health services, rubber and plastics manufacturing, and livestock sales. Efforts are underway to strengthen the MSA's economic base through joint efforts between Odessa and Midland with a view toward increasing business diversification.

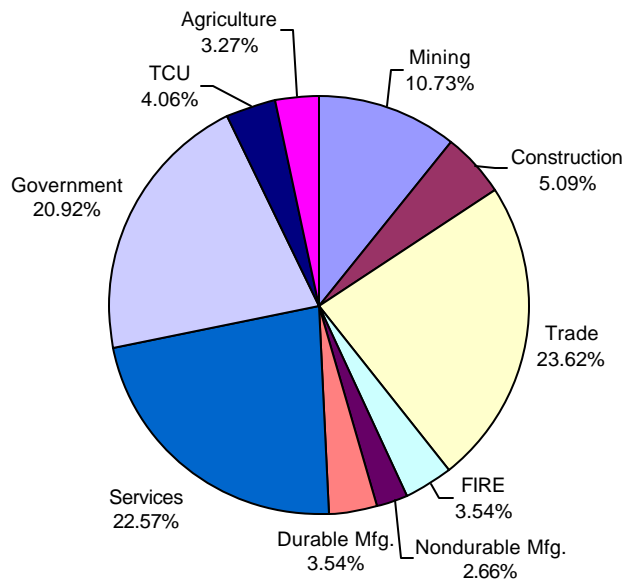


**Permian Basin COG Key Economic Indicators
1990-2000**

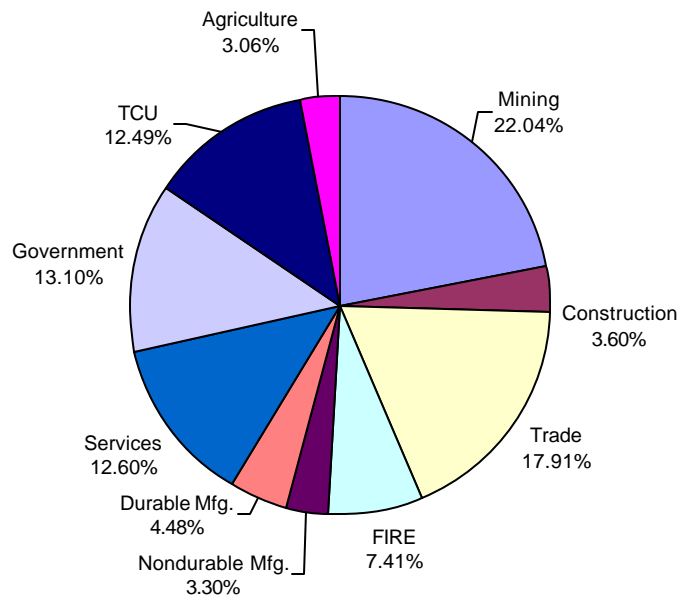
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	369,870	375,170	0.14 %	1.43 %	2.08 %
Output (RGP-Real Gross Product)	\$9.93 bil	\$9.17 bil	-0.8 %	-7.7 %	4.55 %
Wage & Salary Employment	143,880	158,900	1.0 %	10.44 %	2.87 %
Per Capita Personal Income	\$16,390	\$24,120	3.94 %	47.12 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

**Sectoral Composition of Wage and Salary Employment for the
Permian Basin Council of Governments 2000**



**Sectoral Composition of Real Gross Product for the
Permian Basin Council of Governments 2000**



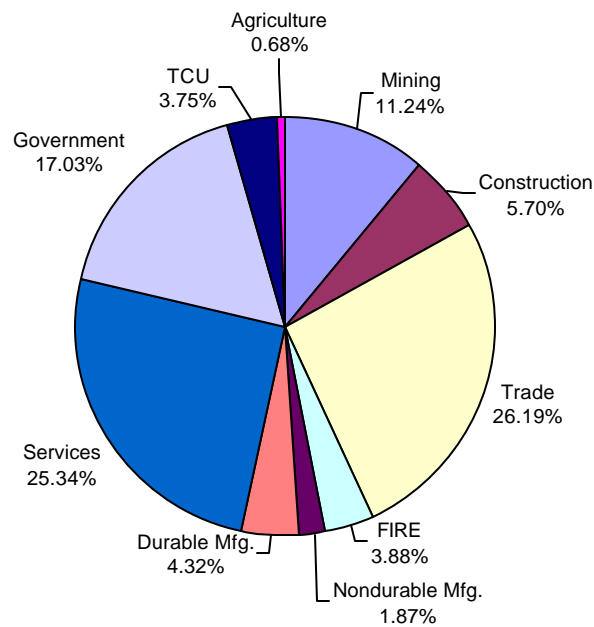
**Odessa-Midland MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	225,350	236,350	0.5 %	4.9 %	2.1 %
Output (RGP-Real Gross Product)	\$6.90 bil	\$6.69 bil	- 0.3 %	- 2.9 %	4.5 %
Wage & Salary Employment	94,510	108,140	1.4 %	14.4 %	2.9 %
Per Capita Personal Income	\$18,130	\$27,140	4.1 %	49.7 %	4.8 %

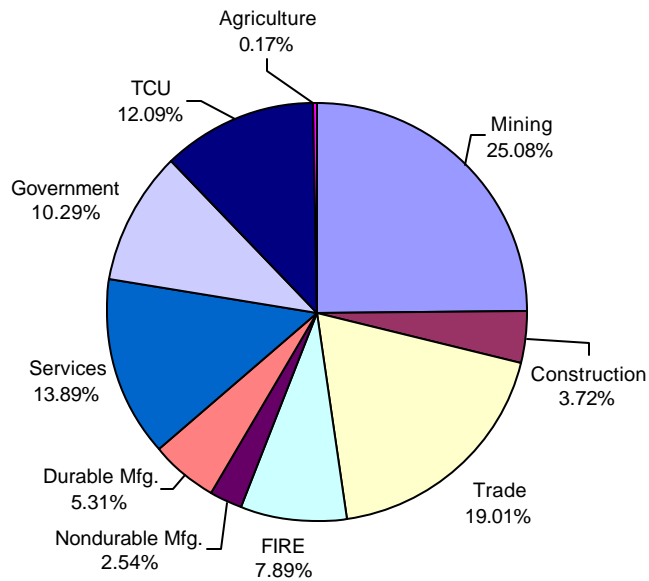
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Odessa-Midland MSA 2000**



**Sectoral Composition of Real Gross Product for the
Odessa-Midland MSA 2000**

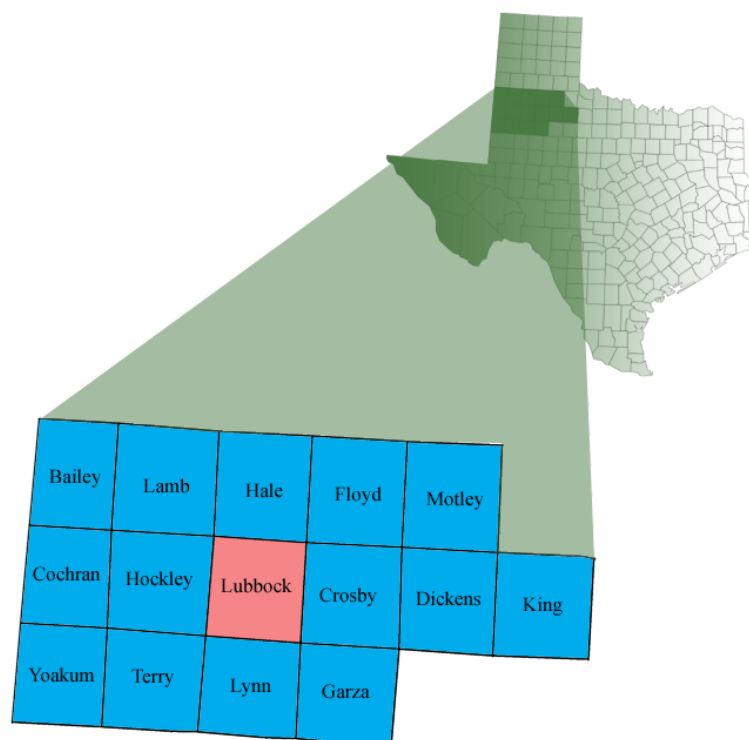


Permian Basin Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

South Plains Council of Governments (COG) Region Profile and Target Clusters



The Lubbock Metropolitan Statistical Area (Lubbock County)—together with Bailey, Cochran, Crosby, Dickens, Floyd, Garza, Hale, Hockley, King, Lamb, Lynn, Motley, Terry, and Yoakum counties—comprise the South Plains COG. A strongly agricultural region, the area experienced modest growth during the period of the 1990s.

Education and healthcare services positively impact the economy and cultural life of the Lubbock MSA, which is the home of Texas Tech University and several outstanding medical facilities. A business-friendly community, its economy is grounded in agriculture, manufacturing, and wholesale and retail trade. Cottonseed processing and cattle feedlots are also prominent contributors. This metro area was recently ranked by the Forbes/Milken Institute among the top thirty “Best Places for Businesses and Careers.”

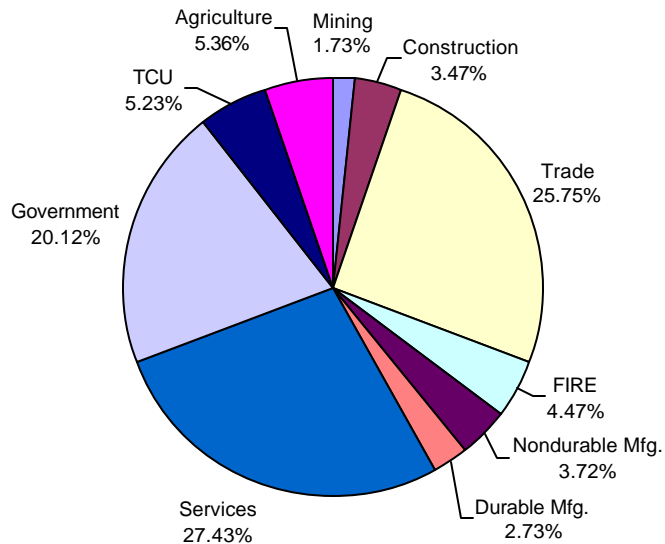


South Plains COG Key Economic Indicators 1990-2000

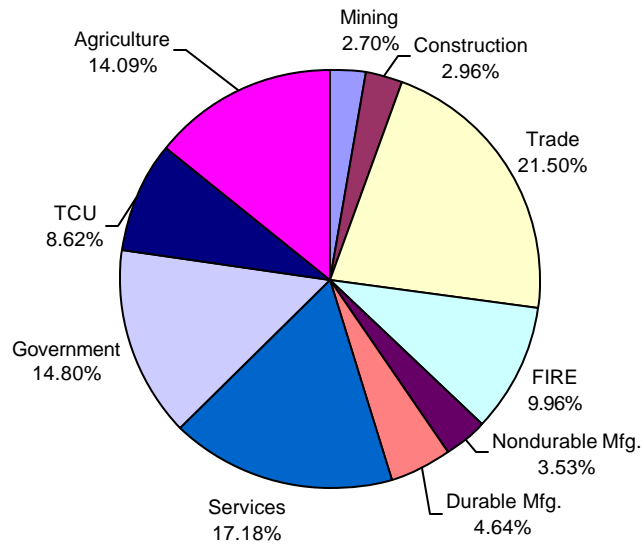
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	362,370	377,820	0.42 %	4.26 %	2.08 %
Output (RGP-Real Gross Product)	\$7.84 bil	\$9.38 bil	1.81 %	19.62 %	4.55%
Wage & Salary Employment	151,590	173,940	1.38 %	14.74 %	2.87 %
Per Capita Personal Income	\$15,850	\$23,660	4.09 %	49.30 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the South Plains Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
South Plains Council of Governments 2000**



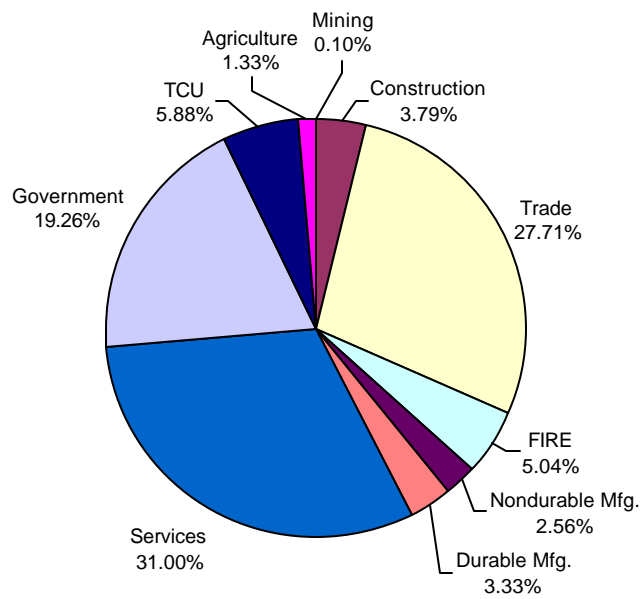
**Lubbock MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	223,140	242,880	0.9 %	8.8 %	2.1 %
Output (RGP-Real Gross Product)	\$4.89 bil	\$6.24 bil	2.5 %	27.5 %	4.5 %
Wage & Salary Employment	103,650	123,380	1.8 %	19.0 %	2.9 %
Per Capita Personal Income	\$16,350	\$24,610	4.2 %	50.5 %	4.8 %

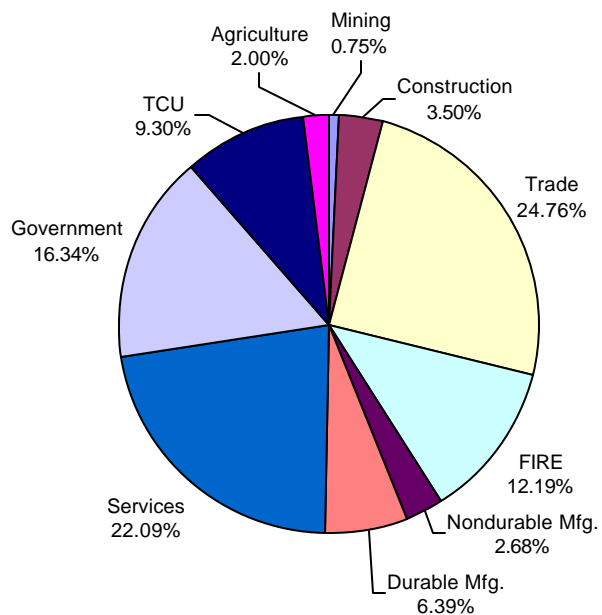
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Lubbock MSA 2000**



**Sectoral Composition of Real Gross Product for the
Lubbock MSA 2000**

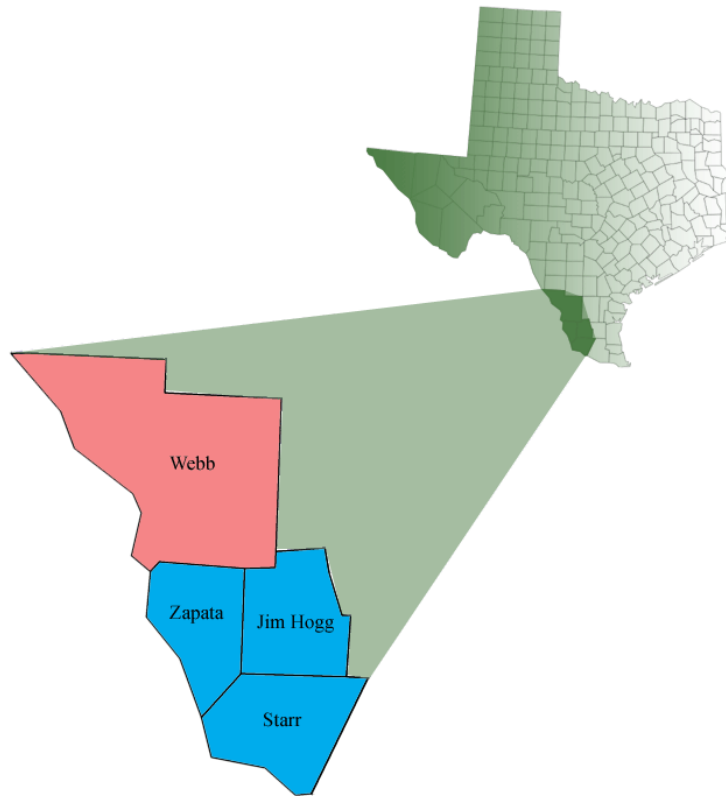


South Plains Council of Governments Region
Target Industry Clusters
Emerging Biotechnology and Medical Cluster
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Energy Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

South Texas Council of Governments (COG) Region Profile and Target Clusters

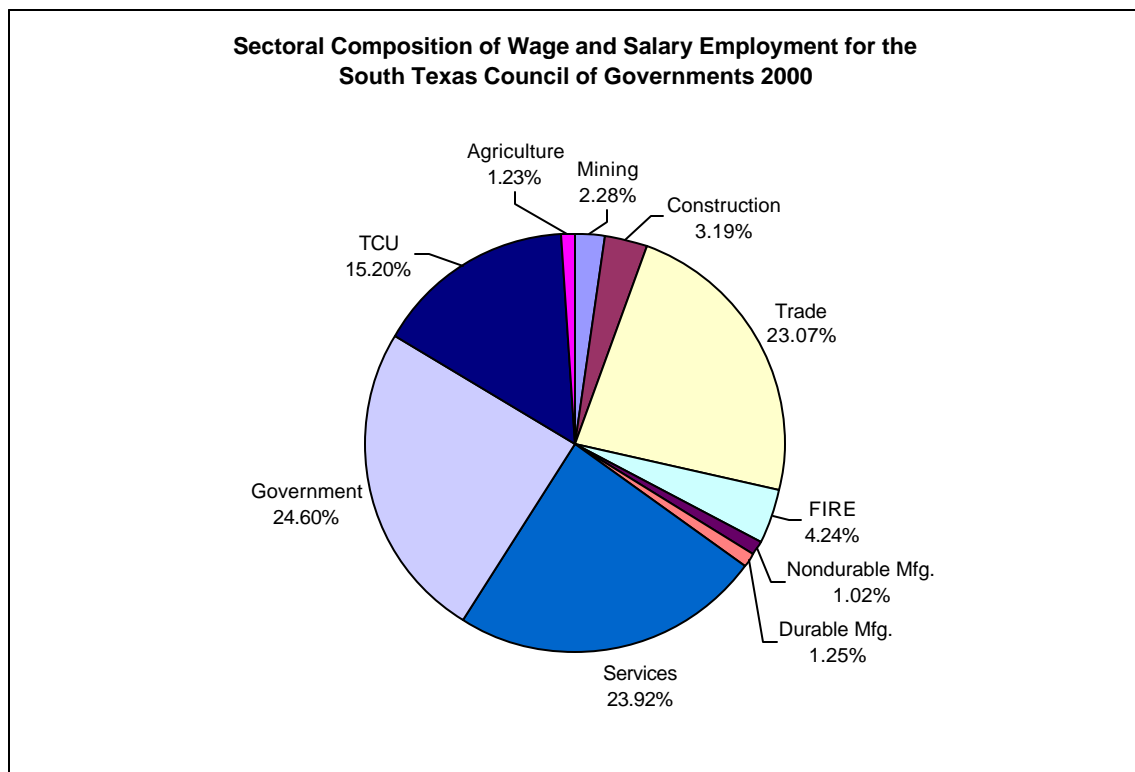


The Laredo Metropolitan Statistical Area (Webb County) and Jim Hogg, Starr, and Zapata counties comprise the South Texas COG. Industries that significantly impact the area economy are international trade, transportation, retail trade, and oil and gas activity. It is the only US-Mexico border area strategically positioned at the convergence of all major US and Mexico highway and rail transportation systems. Bridges lead into two of Mexico's fastest developing industrialized states. However, the region is plagued by persistently high unemployment rates and relatively low income levels.

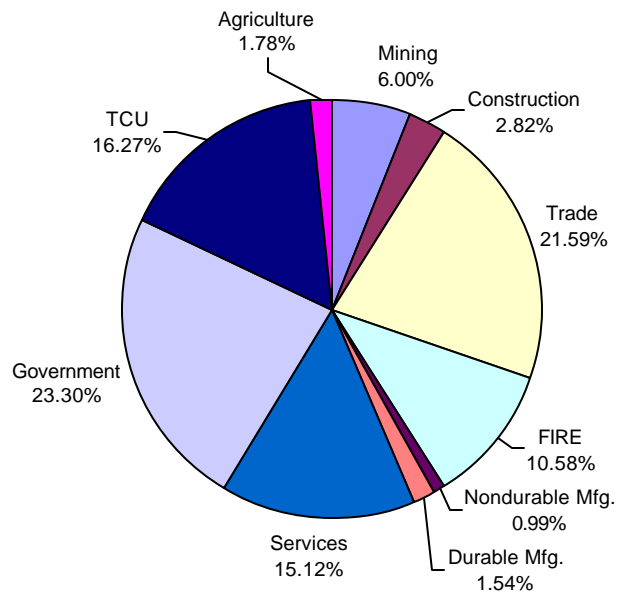
Over the past several years, the Laredo metro area has grown more rapidly than any MSA in Texas. Foreign trade-related activity represents the most important driver of the local economy. Tourism (the metro area's hotel occupancy rate is among the highest in the state), light manufacturing, meatpacking, agribusiness, hunting leases, and government services also play significant roles.



South Texas COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	189,670	266,190	3.45 %	40.34 %	2.08 %
Output (RGP-Real Gross Product)	\$2.15 bil	\$3.58 bil	5.21 %	66.11 %	4.55 %
Wage & Salary Employment	58,170	90,870	4.56 %	56.25 %	2.87 %
Per Capita Personal Income	\$8,580	\$13,950	4.98 %	62.52 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
South Texas Council of Governments 2000**



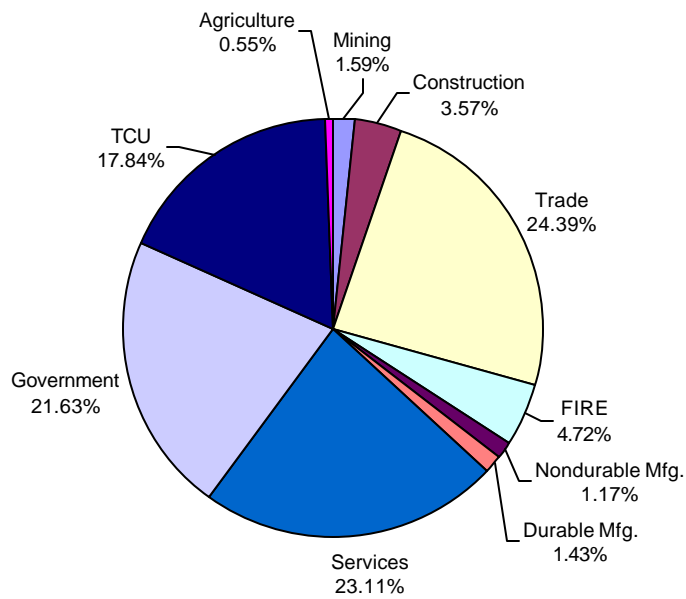
**Laredo MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	134,430	194,870	3.8 %	45.0 %	2.1 %
Output (RGP-Real Gross Product)	\$1.80 bil	\$3.05 bil	5.4 %	69.0 %	4.5 %
Wage & Salary Employment	47,660	75,030	4.6 %	57.4 %	2.9 %
Per Capita Personal Income	\$9,440	\$15,110	4.8 %	60.1 %	4.8 %

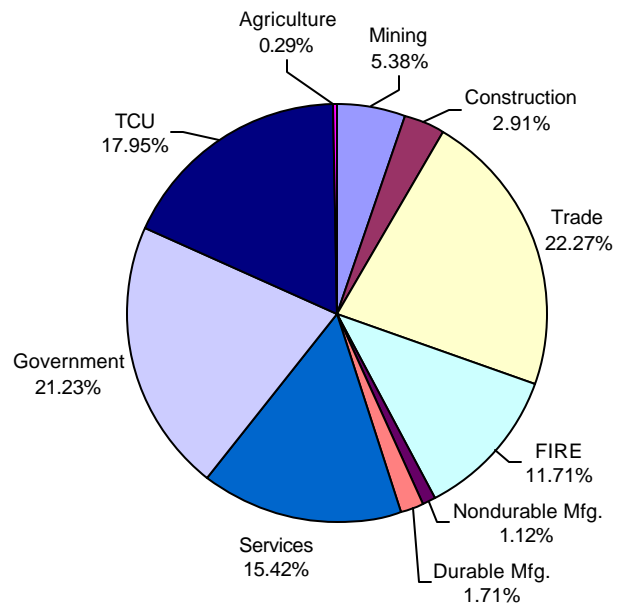
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Laredo MSA 2000**



**Sectoral Composition of Real Gross Product for the
Laredo MSA 2000**

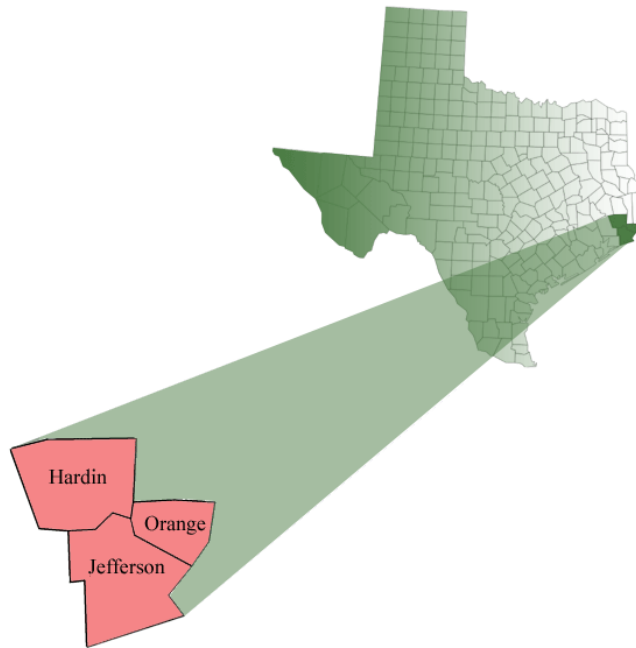


South Texas Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

South East Texas Council of Governments (COG) Region Profile and Target Clusters



The South East Texas COG is home to the Beaumont-Port Arthur Metropolitan Statistical Area (Hardin, Jefferson, and Orange counties). Services, the leading industrial sector in this MSA, experienced moderate growth over the past year, adding more workers than all the other industries combined. The access of this area to navigable waters via the Gulf of Mexico Intercoastal Waterway and Sabine Lake prove advantageous to its shipbuilding activities, oil and gas production, oil platform construction, and petrochemical production. Paper manufacturing, wood processing, and agribusiness also play important roles in sustaining the area's economy.

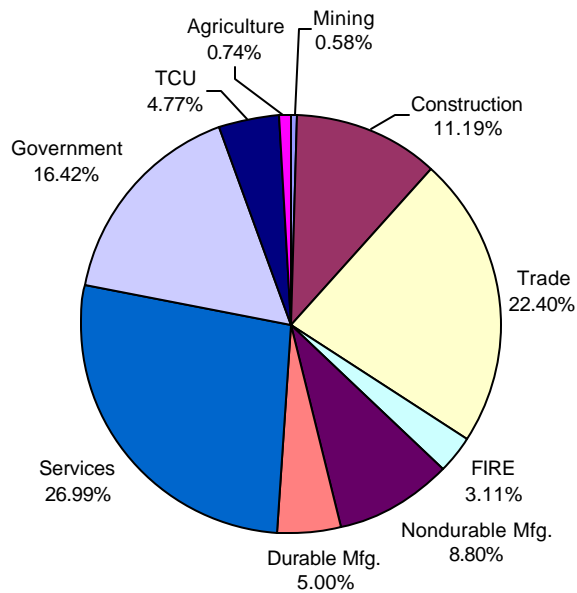


South East Texas COG Key Economic Indicators 1990-2000

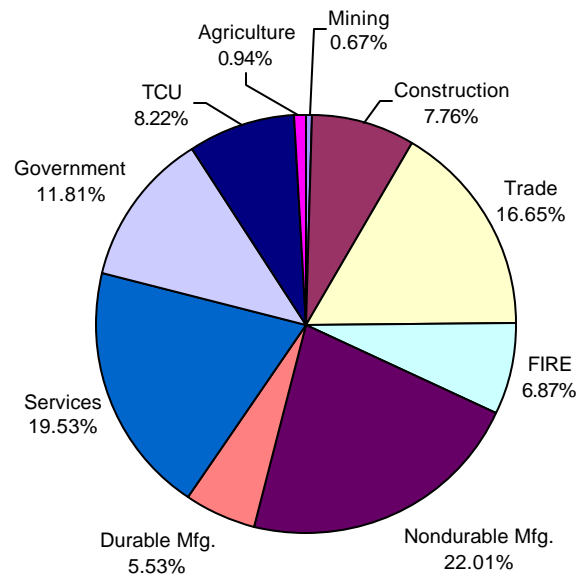
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	361,510	384,980	0.63 %	6.49 %	2.08 %
Output (RGP-Real Gross Product)	\$8.56 bil	\$9.16 bil	0.68 %	6.96 %	4.55 %
Wage & Salary Employment	146,110	169,260	1.48 %	15.84 %	2.87 %
Per Capita Personal Income	\$16,170	\$23,760	3.92 %	46.90 %	4.75 %

* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.

Sectoral Composition of Wage and Salary Employment for the South East Texas Council of Governments 2000



**Sectoral Composition of Real Gross Product for the
South East Texas Council of Governments 2000**



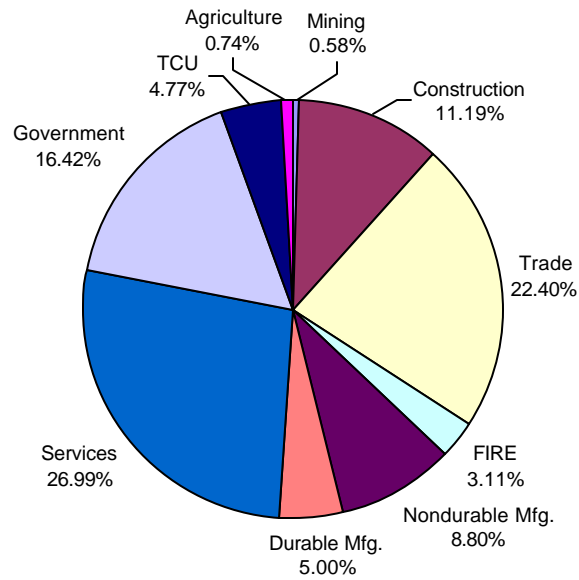
**Beaumont-Port Arthur MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	361,510	384,980	.06 %	6.5 %	2.1 %
Output (RGP-Real Gross Product)	\$8.56 bil	\$9.16 bil	0.7 %	7.0 %	4.5 %
Wage & Salary Employment	146,110	169,260	1.5 %	15.8 %	2.9 %
Per Capita Personal Income	\$16,170	\$23,760	3.9 %	46.9 %	4.8 %

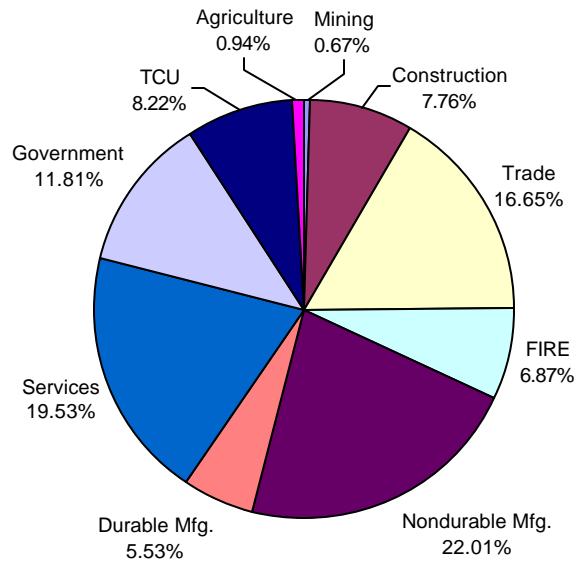
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Beaumont-Port Arthur MSA 2000**



**Sectoral Composition of Real Gross Product for the
Beaumont-Port Arthur MSA 2000**

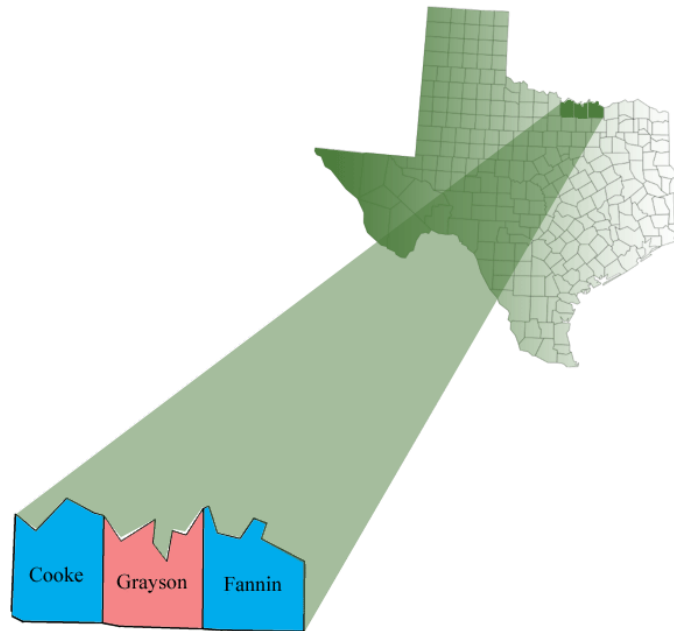


South East Texas Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Transportation Equipment Cluster
Production Support Manufacturing Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Texoma Council of Governments (COG) Region Profile and Target Clusters

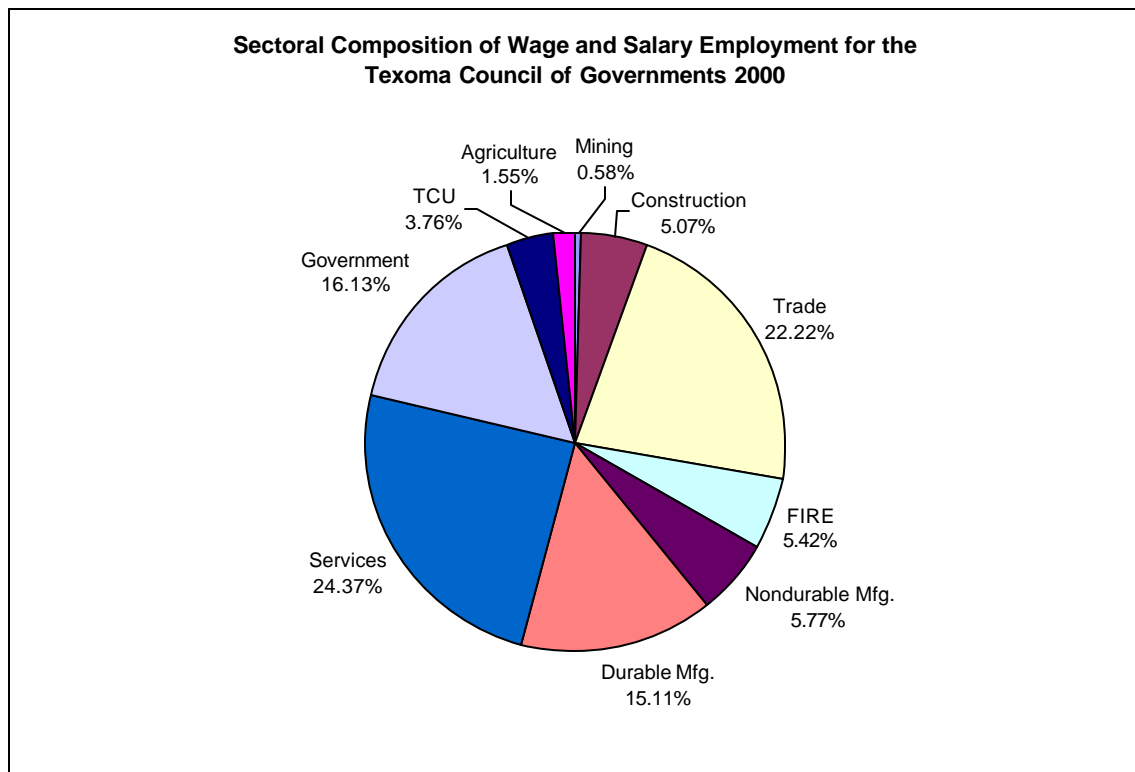


The Sherman-Denison Metropolitan Statistical Area (MSA—Grayson County) as well as Cooke and Fannin counties comprise the Texoma COG.

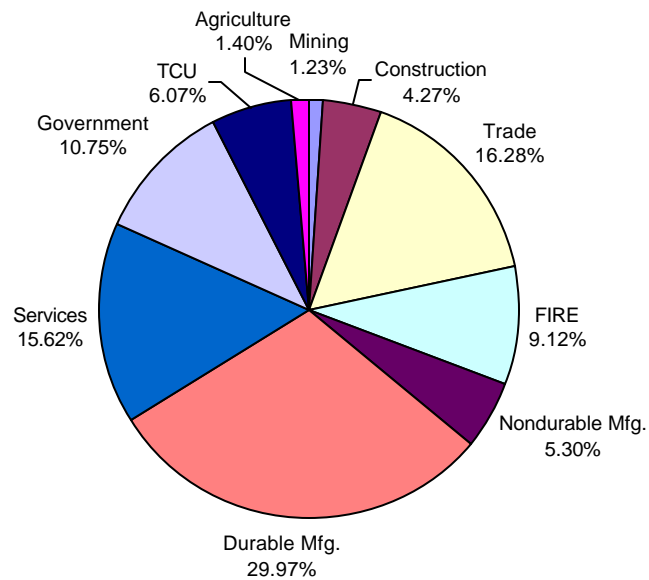
The economy of this region benefits significantly from its role as an important manufacturing and distribution center for northern Texas and southern Oklahoma. The Sherman-Denison metro area has the highest percentage of manufacturing employment of any MSA in the Lone Star State. Tourism and agriculture are also highly important. Most major business activity is centered in the cities of Sherman and Denison.



Texoma COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	150,970	178,840	1.71 %	18.46 %	2.08 %
Output (RGP-Real Gross Product)	\$2.54 bil	\$3.83 bil	4.19 %	50.78 %	4.55 %
Wage & Salary Employment	56,420	69,520	2.11 %	23.21 %	2.87 %
Per Capita Personal Income	\$15,400	\$22,770	3.99 %	47.88 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Texoma Council of Governments 2000**



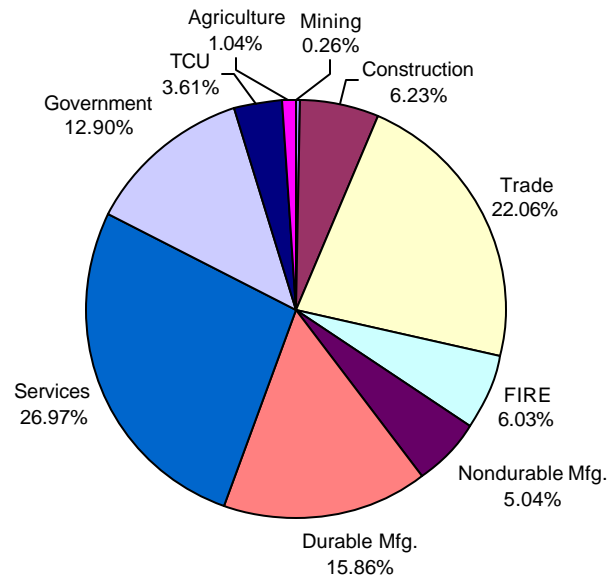
**Sherman-Denison MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	95,120	110,990	1.6 %	16.7 %	2.1 %
Output (RGP-Real Gross Product)	\$1.80 bil	\$2.73 bil	4.3 %	51.7 %	4.5 %
Wage & Salary Employment	39,310	47,370	1.9 %	20.5 %	2.9 %
Per Capita Personal Income	\$16,000	\$23,400	3.9 %	46.2 %	4.8 %

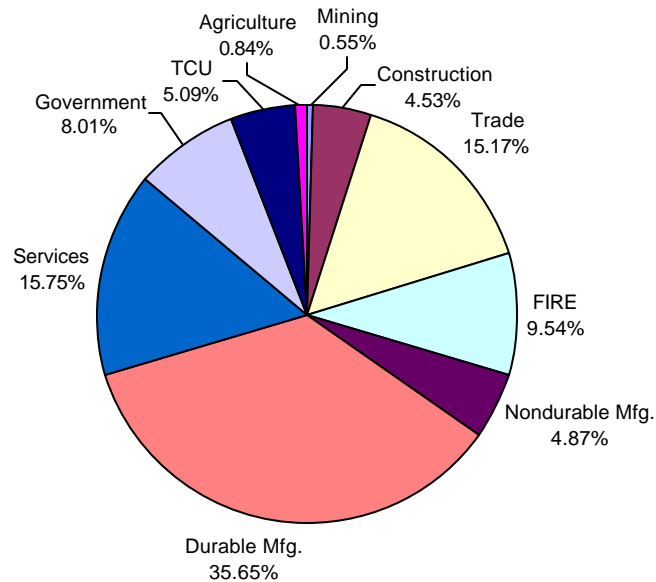
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Sherman-Denison MSA 2000**



**Sectoral Composition of Real Gross Product for the
Sherman-Denison MSA 2000**

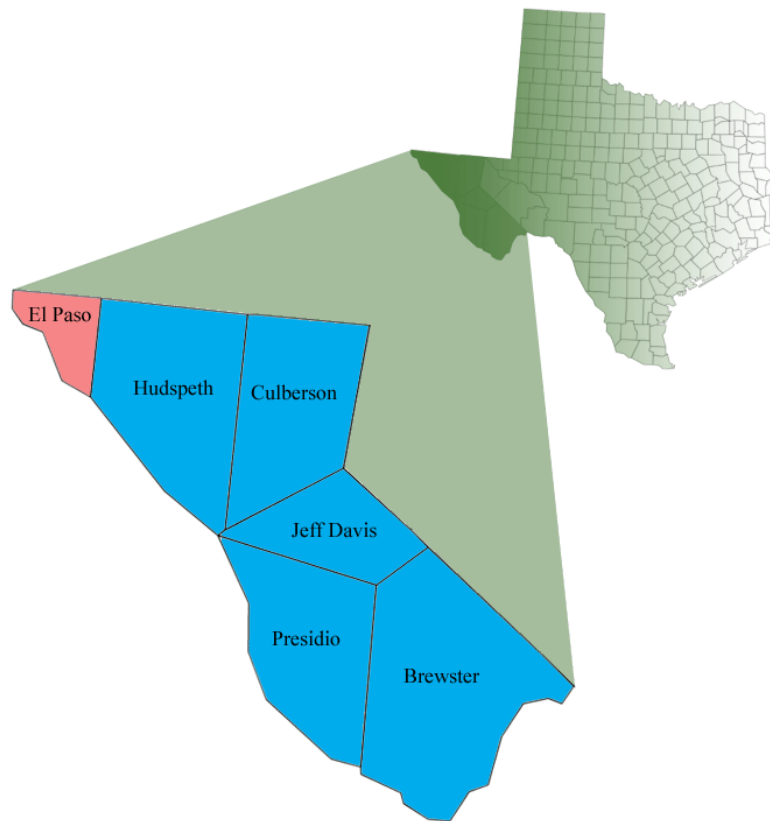


Texoma Council of Governments Region
Target Industry Clusters
Electronics Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

Upper Rio Grande Council of Governments (COG) Region Profile and Target Clusters

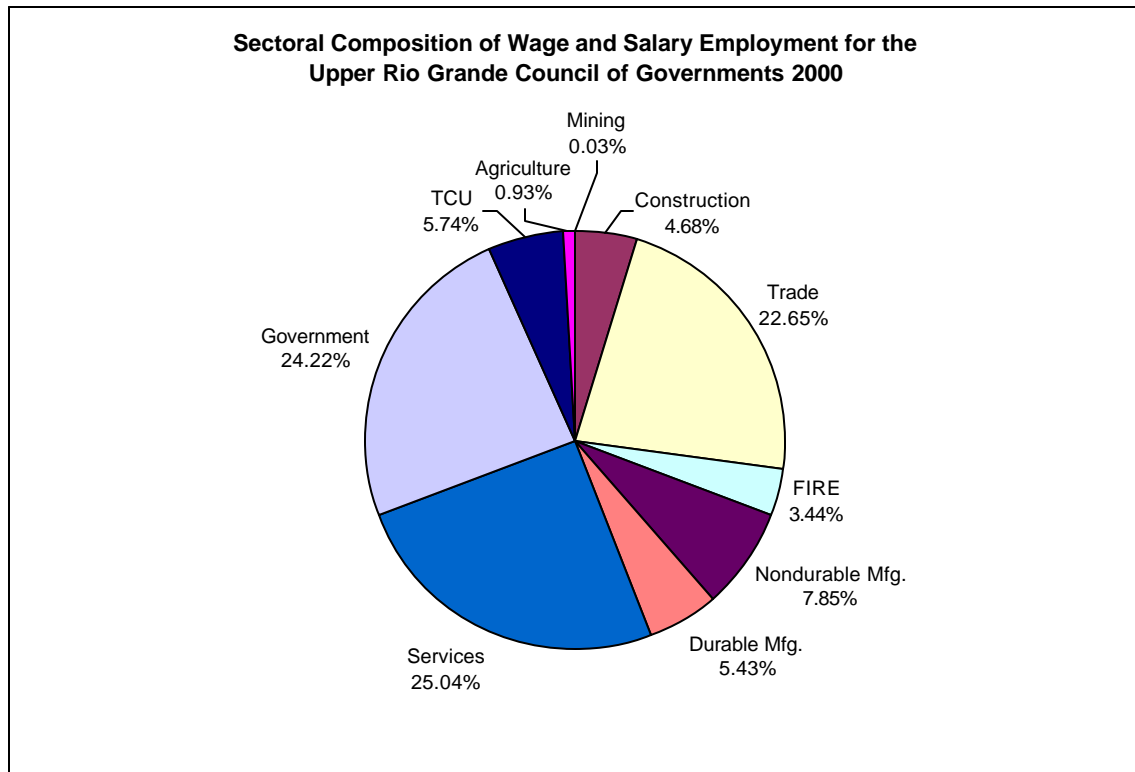


The El Paso Metropolitan Statistical Area (El Paso County), together with Brewster, Culberson, Hudspeth, Jeff Davis, and Presidio counties, comprise the Upper Rio Grande COG. Manufacturing, government, and wholesale and retail trade are major components of the area's economy. Over the decade of the 1990s, the region experienced expansion of almost 20% in the total number of persons employed.

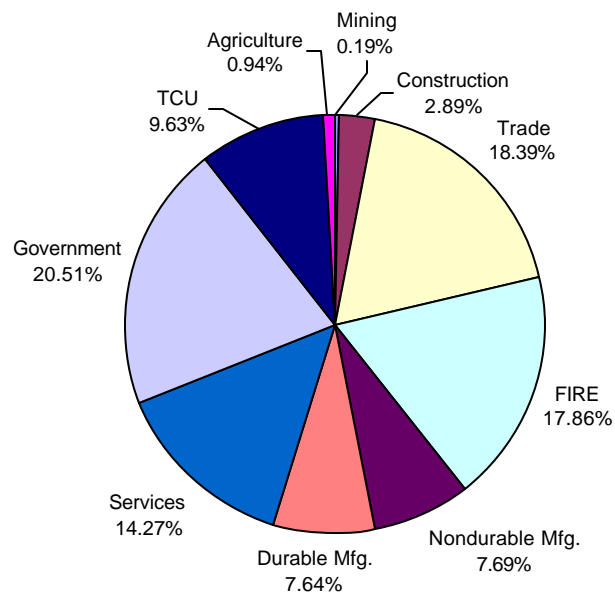
The cost of living in the El Paso metro area ranks below the national average, and although food and transportation expenses often exceed national averages, they are offset by lower costs for housing, health, miscellaneous goods and services, and utilities. El Paso has been cited as one of the state's most efficient communities in delivering government services to its local citizens. The large, young labor pool, ongoing federal funding for infrastructure and healthcare needs, and expanding business activities with Mexico are providing a solid economic foundation for the area.



Upper Rio Grande COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	618,910	706,850	1.34 %	14.21 %	2.08 %
Output (RGP-Real Gross Product)	\$10.19 bil	\$14.65 bil	3.7 %	43.75 %	4.55 %
Wage & Salary Employment	243,500	290,120	1.77 %	19.15 %	2.87 %
Per Capita Personal Income	\$12,350	\$18,500	4.12 %	49.79 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
Upper Rio Grande Council of Governments 2000**



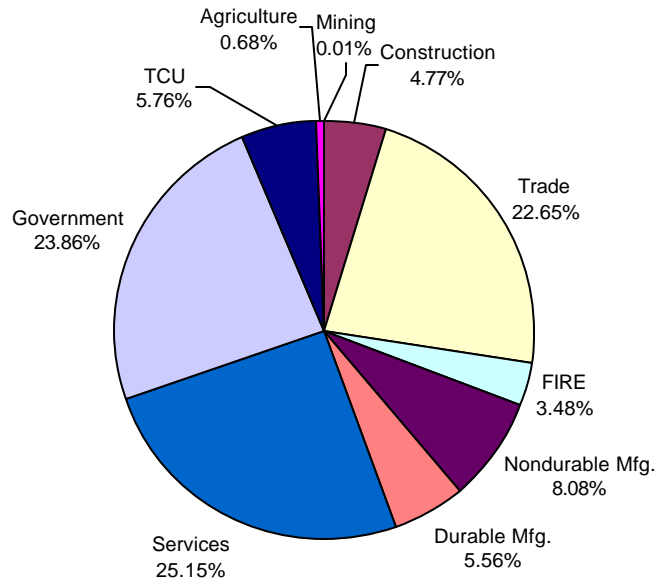
**El Paso MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	595,350	682,110	1.4 %	14.6 %	2.1 %
Output (RGP-Real Gross Product)	\$3.27 bil	\$5.25 bil	4.9 %	60.7 %	4.5 %
Wage & Salary Employment	235,670	280,930	1.8 %	19.2 %	2.9 %
Per Capita Personal Income	\$12,400	\$18,530	4.1 %	49.4 %	4.8 %

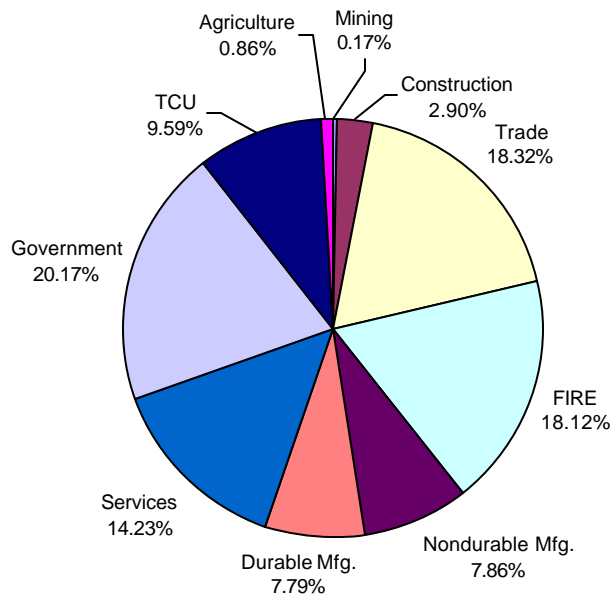
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
EI Paso MSA 2000**



**Sectoral Composition of Real Gross Product for the
EI Paso MSA 2000**



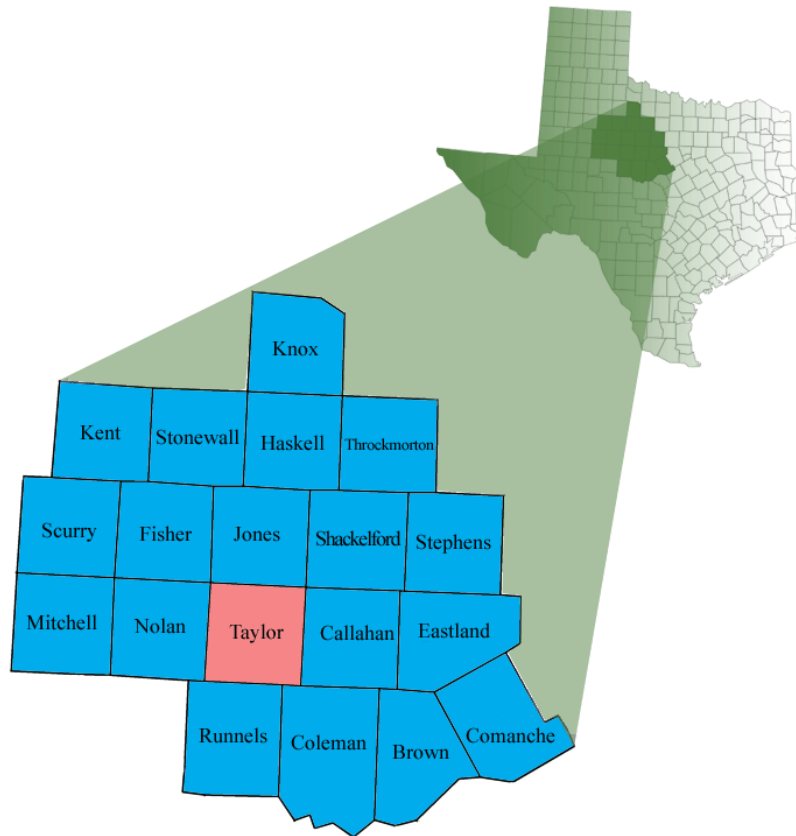
Upper Rio Grande Council of Governments Region
Target Industry Clusters
Electronics Cluster
Information Services Cluster
Business Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Energy Cluster
Petroleum Refining and Chemical Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.



West Central Texas Council of Governments (COG) Region Profile and Target Clusters

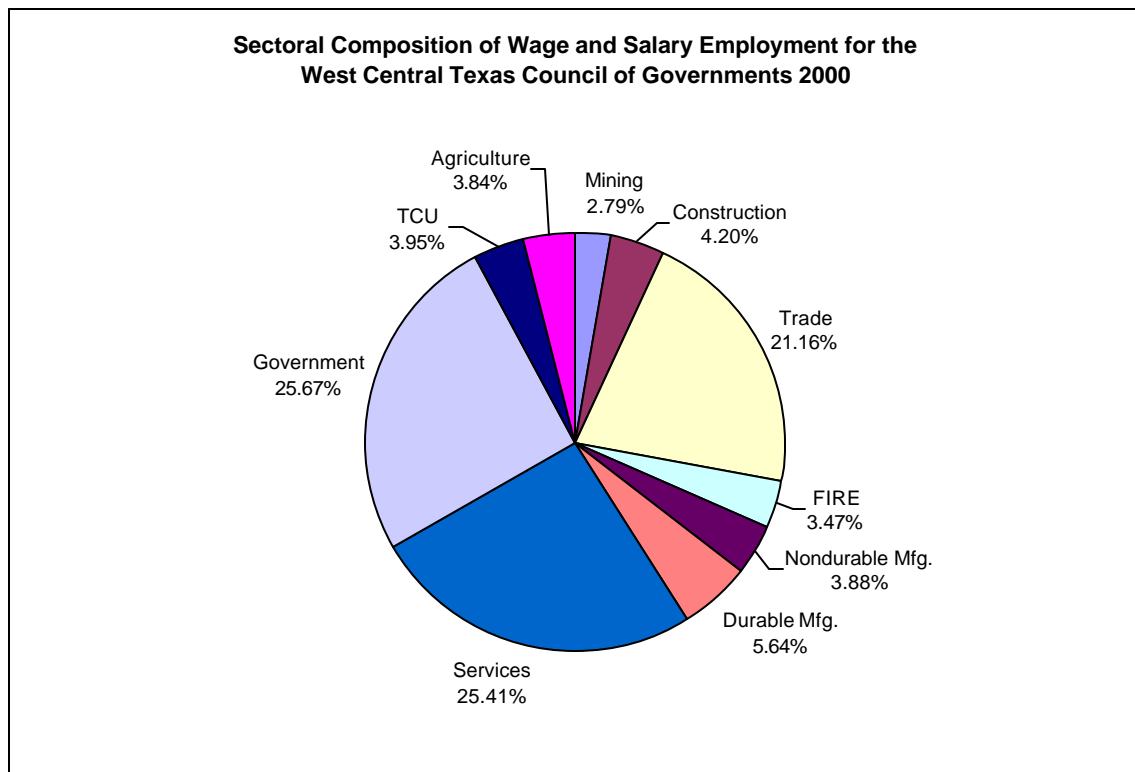


The Abilene Metropolitan Statistical Area (Taylor County) and Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell, Jones, Kent, Knox, Mitchell, Nolan, Runnels, Scurry, Shackelford, Stephens, Stonewall, and Throckmorton counties comprise the West Central Texas COG. Major industries include oil and gas field services and agribusiness and feedlots, as well as education, which is provided by the three private universities and one private junior college. Dyess Air Force Base also makes a significant contribution to the regional economy.

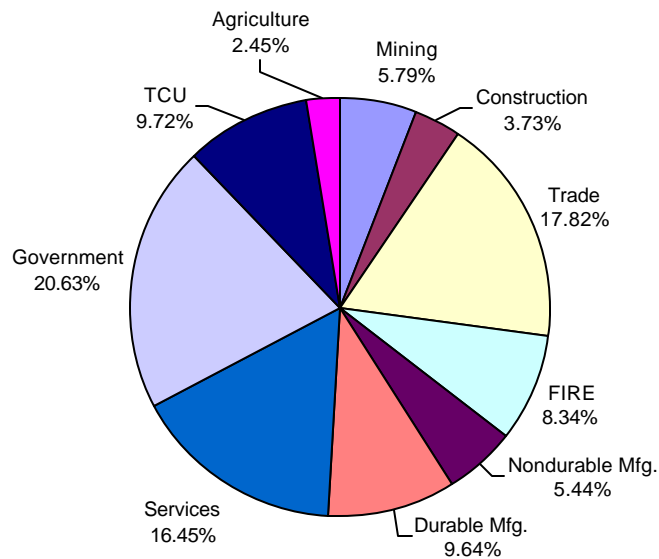
Nearly eight out of every ten workers in the Abilene MSA are employed in the services, trade, and government sectors, with services comprising approximately 35% of the total number of jobs.



West Central Texas COG Key Economic Indicators 1990-2000					
Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	311,460	324,420	0.41 %	4.16 %	2.08 %
Output (RGP-Real Gross Product)	\$5.64 bil	\$6.09 bil	.78 %	8.04%	4.55 %
Wage & Salary Employment	115,610	131,590	1.31 %	13.92 %	2.87 %
Per Capita Personal Income	\$14,740	\$21,580	3.89 %	46.44 %	4.75 %
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.					



**Sectoral Composition of Real Gross Product for the
West Central Texas Council of Governments 2000**



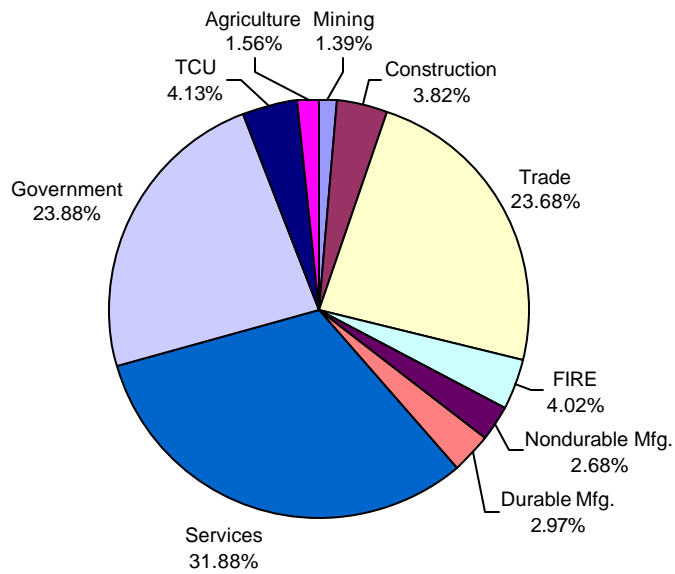
**Abilene MSA Key Economic Indicators
1990-2000**

Key Indicator	1990 Level	2000 Level	CAGR* 1990-2000	Overall 1990-2000	TX CAGR* 1990-2000
Population	119,630	126,440	0.6 %	5.7 %	2.1 %
Output (RGP-Real Gross Product)	\$2.69 bil	\$3.14 bil	1.6 %	16.8 %	4.5 %
Wage & Salary Employment	55,040	62,840	1.3 %	14.2 %	2.9 %
Per Capita Personal Income	\$16,110	\$24,490	4.3 %	52.0 %	4.8 %

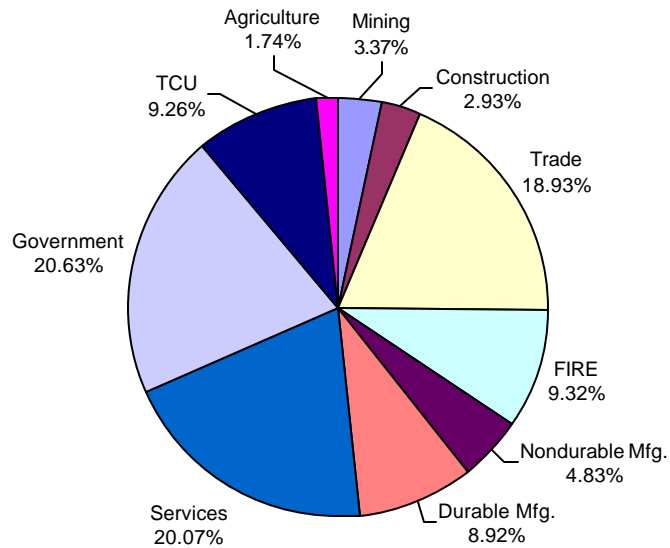
* CAGR is Compound Annual Growth Rate. A CAGR reflects changes in the base from which growth is calculated.



**Sectoral Composition of Wage and Salary Employment for the
Abilene MSA 2000**



**Sectoral Composition of Real Gross Product for the
Abilene MSA 2000**



West Central Texas Council of Governments Region
Target Industry Clusters
Information Services Cluster
Tourism Cluster
Distribution, Transportation, and Logistics Cluster
Heavy Construction Cluster
Energy Cluster
Production Support Manufacturing Cluster
Agricultural and Food Cluster

Source: The Perryman Group

Note: For a description of the Target Industry Clusters, please see Section V of the full report. Clusters selected based on industry linkage and cluster analysis, occupational workforce requirements and availability, support requirements, and a comprehensive evaluation of future industrial prospects.

The Perryman Group

Firm Information

The Perryman Group, Inc. (TPG) specializes in all aspects of economic analysis, research, and forecasting. Led by M. Ray Perryman, the organization enjoys a worldwide reputation for its forecasting and modeling efforts. Clients and subscribers frequently incorporate Perryman results into their own individual projects.

Forecasting and Modeling—The firm is equipped with a full range of international, national, regional, state, metropolitan area, and small area (zip code, census tract, etc.) forecasting and modeling capabilities. A command of this data allows forecasting of energy demand and supply, real estate market absorption, retail sales, industrial performance, transportation demand, and bond feasibility. In addition, other economic analysis including labor markets, demographics, global markets and trade, and cost factors such as wage rates and capital costs are generated on a regular basis for clients and subscribers.

Impact Assessment—Over the past two decades, The Perryman Group has developed a reputation for quality impact assessment techniques. The firm maintains a set of impact evaluation models which can be applied in numerous contexts. These systems have been employed in projects measuring economic effects of various activities around the globe. Specific industrial detail can be provided for more than 500 industries at the national, state, regional, or MSA level.

Previous studies include the economic impact of site locations, utility rate changes, infrastructure development, new transportation facilities, tourist attractions, regulatory changes, educational investments, legislative changes, modifications of the tax structure, and insurance reform. In addition to traditional economic aggregates such as employment, income, sales, expenditures, and gross product, TPG can also provide projections of consumer spending, secondary development, and fiscal revenues.

Regulatory Analysis—The Perryman Group has considerable experience and expertise in providing support for regulatory proceedings and initiatives. Previous projects have included analyzing the effects of utility and transportation rate changes on consumers and industrial concerns and evaluating the need for new electric facilities, water projects, transportation projects, and telecommunications investments. Substantial environmental analysis has also been completed. In addition, testimony has been provided before state and federal regulatory bodies. TPG has also provided extensive research support for numerous deregulation initiatives.

Economic Development and Strategic Planning—Utilizing systems specifically geared to economic development, the firm's consultants can identify "target industries" that are likely to expand in the near future and be a complement to the local resource base. Once these targets are identified and finalized, the project team prepares a list of industrial prospects, formulates specific marketing programs, inventories existing facilities and sites, and develops overall strategic plans. The Perryman Group also works extensively with corporations seeking locations for new and ex-

panded facilities, thus bringing an essential synergy to the economic development process.

The Perryman team of professionals brings a wealth of resources to programs designed for creating, implementing, evaluating, and maintaining successful strategic processes. The firm's vast base of information aids in marketing initiatives, contingency assessment, internal evaluation, monitoring, and other aspects of a comprehensive planning effort.

Litigation Support and Expert Testimony—For litigation support and expert testimony purposes, The Perryman Group investigates and testifies on a variety of issues. Providing research, deposition, and trial testimony for some of the largest law firms in the country, the Perryman team has addressed topics including security markets, intellectual property, employment, forensics, officers' and directors' liability, real estate markets, cash flow estimation, environmental and natural resource factors, lender liability valuation, taxation, damage measurement, business losses, and antitrust issues.

Publications—The Perryman Group prepares several publications on a regular basis. The Forecast Series provides an in-depth analysis of the national, state, regional, and local economies in the State of Texas.

The Perryman Report is a monthly newsletter that provides analysis of local, statewide, national, and international issues, with particular attention given to how these impact the economy in Texas. The Perryman Texas Letter is a four-page synopsis of economic issues across the State of Texas; The Letter is also published on a monthly basis.

The professionals at The Perryman Group prepare corporate analyses, economic reports, and other materials to meet any information dissemination needs. Complete research facilities and resources are available to produce all types of business reports and presentations.

Presentations—Nationally recognized as an informative and entertaining speaker, Dr. M. Ray Perryman addresses audiences from all walks of life. Dr. Perryman has established a reputation for communicating often dry subjects in an effective and humorous fashion. Other presentations include specialized seminars on the economic outlook, industrial trends and patterns, economic development, and forecasting techniques.

In addition, the firm often provides briefings to corporate boards of directors and senior management personnel on a variety of topics, including assessment of national and regional economic conditions, trends in specific industries, patterns in international trade, and strategic planning in an uncertain business environment.



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Biographical Profile M. Ray Perryman



Dr. Ray Perryman is President and CEO of The Perryman Group, an economic research and analysis firm based in Waco, Texas. He was born on Christmas Day—the year is not important—and has never quite accepted the fact that it is not his birthday everyone is celebrating.

Dr. Perryman holds a BS in Mathematics from Baylor University and a PhD in Economics from Rice University. He always felt that the BS would have been somehow more appropriate for Economics. He took his first economics course on a coin flip between economics and psychology. If it had gone the other way, there might be some really messed up people in the world. In addition to his earned degrees, Dr. Perryman has received an honorary doctorate from the International Institute for Advanced Studies. He especially liked that one because he didn't have to work for it. He told his kids they had to start calling him "Doctor Doctor." They were not impressed.

Dr. Perryman has held numerous academic positions in his career including ten years as Herman Brown Professor of Economics and five years as University Professor and Economist-in-Residence at Baylor University, as well as five years as Business Economist-in-Residence at Southern Methodist University. He has authored several books and more than 300 academic papers, and has served as President of both the Southwestern Economic Association and the Southwestern Society of Economists. He also lives in Odessa while working in Waco, is the father of five young Texans (ages 14 to 20), gets lost on his own block, and once ran one of his cars into the other one. His current academic roles include Senior Research Fellow of the IC² Institute of the University of Texas and Institute Distinguished Professor of Economic Theory and Method at the International Institute for Advanced Studies. His duties in these positions include traveling to exotic places and doing interesting things.

In the professional arena, Dr. Perryman has authored more than 1,500 trade articles, publishes a subscription forecasting service and two monthly newsletters, writes a syndicated newspaper column, hosts a daily radio commentary, and appears regularly on National Public Radio. He has never played in the NBA. He has served on





dozens of governmental task forces around the world; plays a significant ongoing role in public policy on international, national, state, and local levels; and is an advisor to scores of federal and state entities. He presently serves on the Governor's Task Force on Economic Growth and the Governor's Technology Working Group and was a featured speaker at the recent Bush Economic Forum. His firm engages in a broad range of complex projects for major corporate and governmental interests and has served the needs of more than 1,000 clients. In other words, he is an obsessive-compulsive workaholic.

Dr. Perryman has received hundreds of prestigious awards for his academic and professional efforts. He has been named the Outstanding Young Economist and Social Scientist in the US, the Outstanding Young Person in the World in Business and Economic Innovation, one of Ten Outstanding Young Americans and Ten Outstanding Young Persons in the World. As he loses his hair and puts on his reading glasses, it is highly unlikely that he will ever win another award with the word "Young" in it.

Dr. Perryman has been honored by The Democracy Foundation for his role in promoting capitalism in China, The Asia and World Institute for promoting international trade and academic exchange, and the Systems Research Foundation for his contributions to the field of modeling. (That would be "economic" modeling, not "fashion" modeling. He seems to think there might be some confusion.) He has also received the Lifetime Achievement Award from the International Institute for Advanced Studies. He was skeptical about that one. He was afraid that a Lifetime Achievement Award was something you received just before you croaked.

Dr. Perryman has received citations from governments around the world, presidents, governors, Congress, and national and state administrative and legislative bodies. He has received even more citations, however, from the Texas Department of Public Safety.

The business press has called Dr. Perryman a "world class scholar," a "genius," a "savant," a "sage," and a "wizard." *Texas Monthly* has called him "The most quoted man in Texas," and President Bush has called him "one of the world's leading economists." His kids have called him a dork, a dweeb, a geek, and a loser, and his wife calls him a big ----





-- well, we won't go there! Some of his most gratifying work has been in the field of economic development, where he has played a key role in the creation of hundreds of thousands of jobs. He now only hopes that someday at least one of his kids will hold one of those jobs. He is a past recipient of the Outstanding Texas Leader Award and has been honored by the Texas Legislature for his "tireless efforts in helping to build a better Texas."

