

Southwest Economy



Growth on the Border or Bordering on Growth?

The Texas–Mexico border tends to grow quickly in terms of population and jobs. Gains in well-being, however, are best captured by lower unemployment rates and growth in real incomes. In the past, border unemployment rates have been among the nation's highest, and border per capita income has been about half the national average. When border incomes have made tenuous gains, progress has often been swept away by a Texas recession or a Mexican peso devaluation. Interestingly, border progress in the late 1990s seems to have broken with the past in many ways. The border boom came about as the Texas and Mexico economies grew in synchrony. Now, with both economies stalling, some questions come to mind: What are the border's most recent gains? How were they achieved? This time, are they here to stay?

Recent Gains in Border Well-Being Falling Unemployment and Rising Income.

As the border economy grew in the 1990s, unemployment rates fell and incomes rose. Although the
(Continued on page 2)

A Dose of Market Discipline: The New Education Initiatives

In the New Economy, growth increasingly depends on the skills of the labor force. Given education's role in the development of such skills—and the widely recognized shortcomings of our educational system—upgrading America's schools could boost economic growth. So it is not surprising that the Bush administration has devoted a large part of its domestic agenda to injecting a dose of market discipline into the public school system.

On Jan. 8, President Bush signed into law the No Child Left Behind Act of 2001 (NCLBA). Together with the expansion of education IRAs as part of last year's tax cut, the NCLBA has the potential to significantly improve both student performance and economic growth.

There is little doubt that the public school system in the United States falls

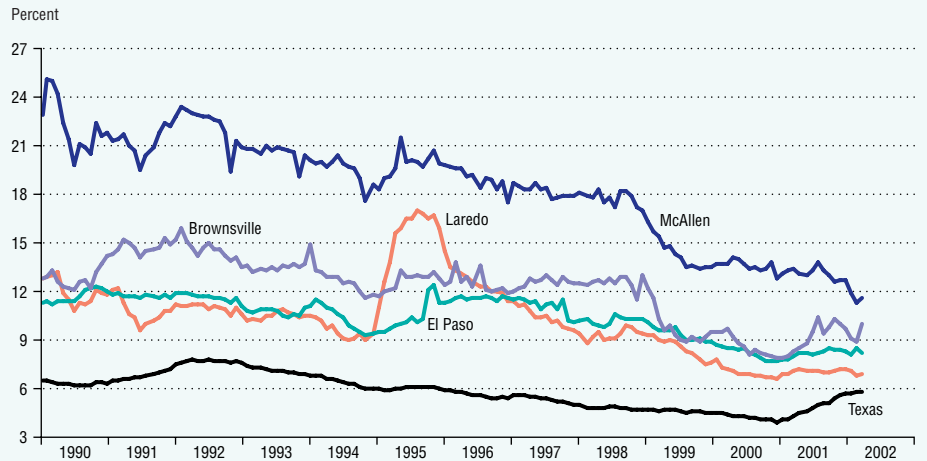
(Continued on page 9)

INSIDE:

*China's Growing
Economic Influence in
East Asia after WTO*

Chart 1

Border Unemployment Rates Improve



NOTE: Data are seasonally adjusted.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

Border unemployment rates have held up well even in the current economic slowdown.

unemployment rate for the border cities continues to be higher than the unemployment rate in Texas and the nation, the past decade witnessed record improvements. As Chart 1 illustrates, there is a stark downward trend for unemployment rates across all border cities between 1990 and 2000. McAllen, which has historically had the highest unemployment rate among the border cities, showed the greatest improvement. Between 1990 and 2000, the McAllen unemployment rate dropped from 25 percent in February 1990 to 12.5 percent in December 2000, a 50 percent decline. Laredo, which for the most part has had the lowest unemployment rate among the border cities, saw its unemployment rate fall from around 12 percent in 1990 to its historic low of 6.3 percent in December 2000.

Border unemployment rates have held up well even in the current economic slowdown. Although the Texas rate has climbed to a six-year high of 5.8 percent, the unemployment rates in El Paso, Laredo and McAllen have remained flat or falling over the past year. While unemployment rates rose in early 2001 in Brownsville, McAllen continued to see improvements, with rates dropping throughout last year. Laredo's seasonally adjusted unemployment rate is back to 6.9 percent, where it was a year ago, and the El Paso rate has remained generally flat, rising slightly from 8 percent to 8.2 percent between

March 2001 and March 2002.

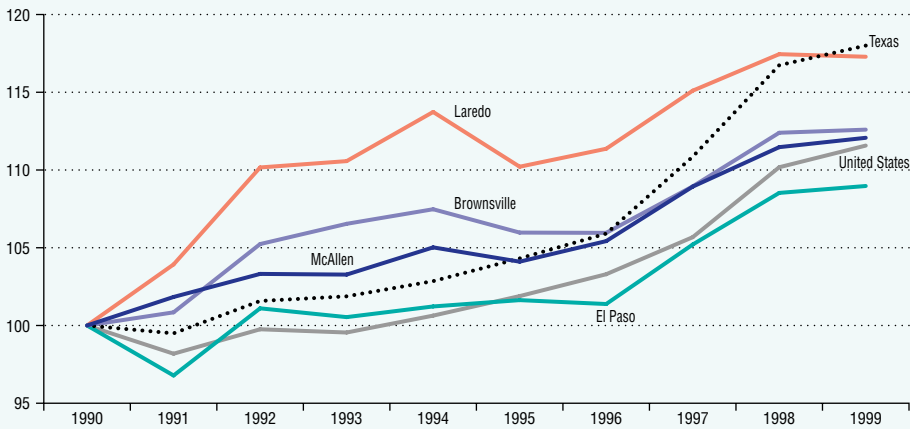
Much like unemployment, income levels on the border do not compare favorably with Texas and U.S. averages. However, like the changes in unemployment, border incomes also improved in the 1990s. In fact, per capita income in every border city except El Paso rose faster than U.S. income between 1990 and 1999 (Chart 2). Border city per capita income rose 12.7 percent in real terms compared with 11.6 percent for the nation. Laredo registered the most impressive gains, followed by Brownsville and McAllen. El Paso had the slowest income growth of the four border metropolitan areas, growing 9 percent in real terms between 1990 and 1999.

What Explains Falling Unemployment and Rising Income? In general, unemployment rates fell as jobs grew more quickly than the population, and incomes rose as two things happened: Wages increased within certain industries, and jobs grew in industries that pay relatively high wages. As Chart 3 details, employment growth outpaced rapid population growth in all the border cities, leading to the declines in the unemployment rate. Another important factor in the Rio Grande Valley has been the declining importance of agriculture. Farm work is typically seasonal and low-paying. The shrinking of the sector has reduced the number of farm workers and contributed to falling unemployment rates in McAllen

Chart 2

Border Per Capita Income Outgrew the Nation in 1990s

Real index, 1990 = 100



SOURCE: Bureau of Economic Analysis.

Key industries are determined by the border's unique function as gateway to international trade and destination for consumers from Mexico.

and Brownsville. At the same time that farm work has shrunk in South Texas, opportunities for other low-skilled work across the country have risen. This may have led to out-migration of seasonal workers from this region to year-round employment in expanding industries such as poultry production and processing in the Southeast and meat packing in the Midwest.

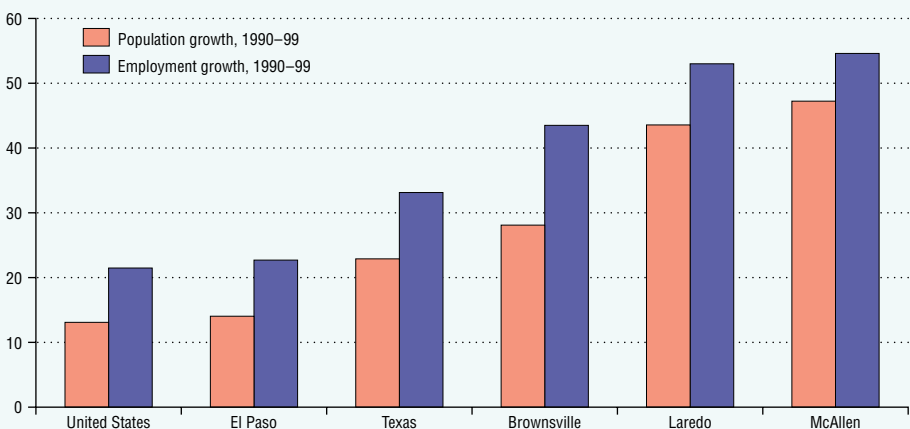
The rise in border incomes, meanwhile, can be traced to an increase in average earnings, particularly in certain growth industries, as well as a rise in employment in high-paying industries.¹

Key industries are determined by the border's unique function as gateway to international trade and destination for consumers from Mexico. As a result, there is a larger than average share of employment in sectors such as government, transportation, and retail and wholesale trade. Transportation and government—along with finance, insurance and real estate (FIRE)—were the big growth sectors that set the border apart from the rest of the country by exceeding U.S. job growth rates in the 1990s (*Chart 4*). All three of these industries pay more than the average border job.²

Chart 3

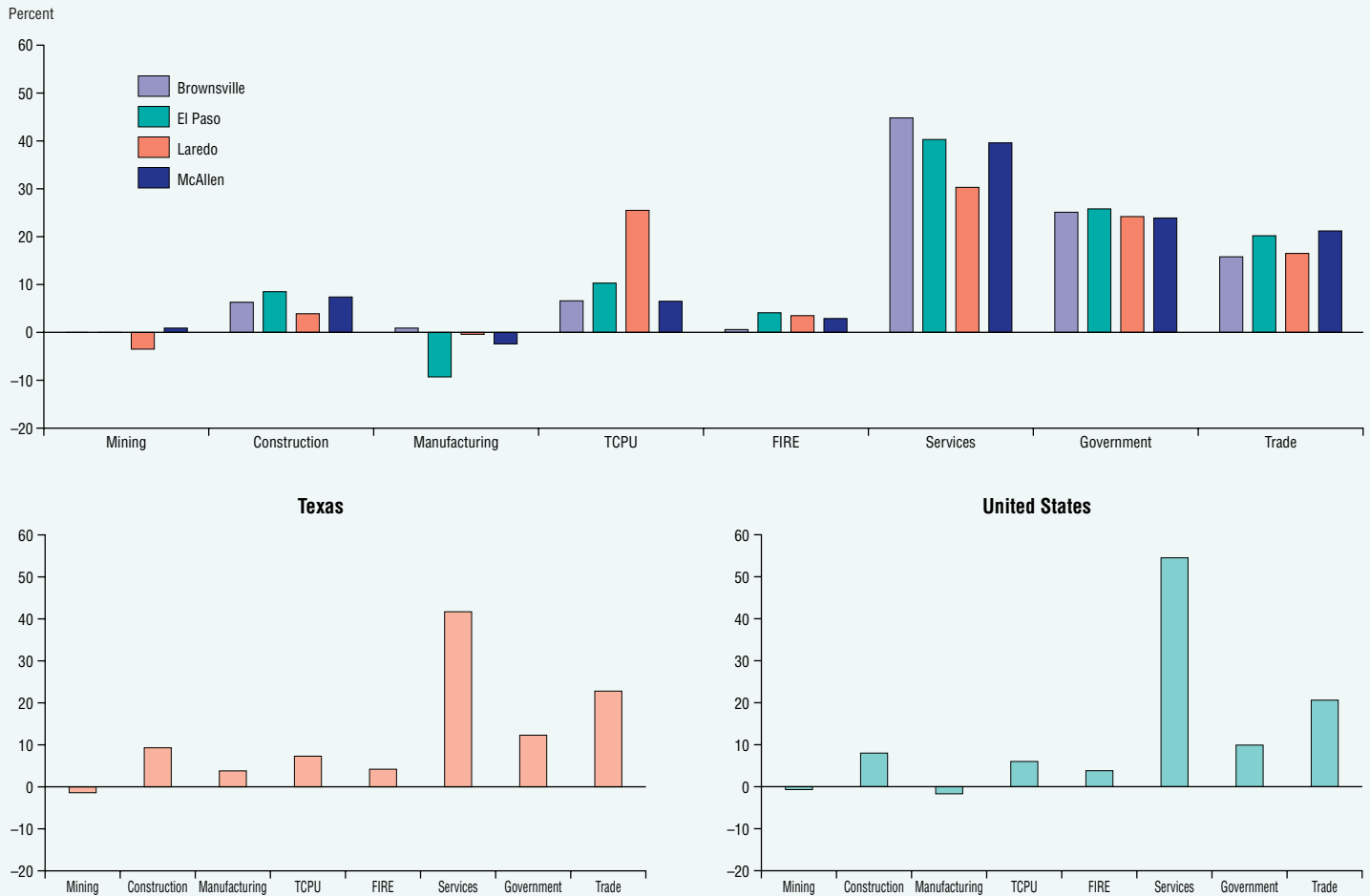
Job Growth Outstrips Population Increase in 1990s

Percent



SOURCES: County level data from U.S. Census; Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

Share of Employment Growth by Industry in Border Cities, Texas and the United States, 1990–2000



NOTE: TCPU is transportation, communication and public utilities; FIRE is finance, insurance and real estate.
 SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

Several of these industry sectors were also among those experiencing the biggest increase in earnings over the decade. As shown in Chart 5, average earnings per worker in FIRE, mining, federal government and wholesale trade grew at above-average rates (62, 34, 15 and 11 percent, respectively).

The expansion in federal government employment, such as record growth in the U.S. Border Patrol as part of a border crackdown on illegal immigration, likely led to the earnings increases in this sector. Ironically, while some border sectors gain from keeping people out, others, such as wholesale and retail trade, gain from letting them in. The wholesale and retail trade sectors are clearly dependent on the inflow of Mexican shoppers. Note, for example, the impact of the peso devaluation in late 1994 on these

industry earnings (*Chart 5*). These sectors do not begin to recover from this shock until after 1996.

Interestingly, among all industries over this time, the most impressive earnings gains are made in the FIRE sector—average earnings grew 62 percent between 1990 and 1999. The tremendous growth in population, and an accompanying increase in the demand for housing, contributed to this sector’s remarkable growth.³ As Chart 3 illustrates, three metropolitan areas on the Texas–Mexico border exceeded both U.S. and Texas population growth rates, while El Paso grew faster than the United States (although slower than the state).

Most of the border population growth can be attributed to high rates of natural increase (births minus deaths), accounting for about 62 percent of the

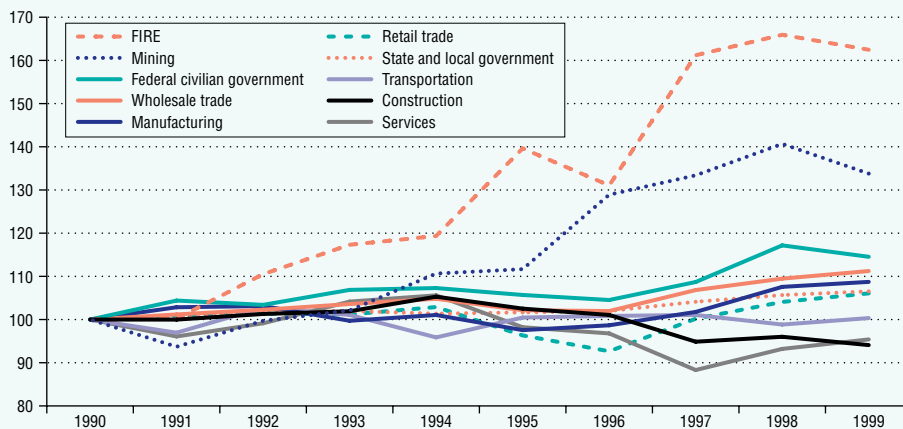
population increase in McAllen and Laredo and 77 and 98 percent of the increase in Brownsville and El Paso, respectively. There is also substantial international immigration, both legal and illegal, to the border cities. Laredo and McAllen experienced domestic in-migration as well, accounting for about 9 percent of the population increase versus 29 percent through international immigration in both cities.

The border population boom fueled a construction boom that brought down the real cost of housing in almost every border city during the 1990s.⁴ Single-family building permits increased 54, 53 and 57 percent in Brownsville, El Paso and McAllen, respectively, between 1992 and 1999. A significant share of residential building and home sales has been for maquiladora executives and managers

Chart 5

Average Earnings per Worker by Border Industry

Real index, 1990 = 100



NOTE: Border includes Brownsville, El Paso, Laredo and McAllen.
SOURCE: Bureau of Economic Analysis.

Border poverty rates are well above the national average, and the perception of the border is one of chronic poverty.

who live on the U.S. side of the border and commute to work.

Despite Progress, Poverty Remains.

Despite above-average border income growth in the 1990s, the decade did relatively little to move border incomes closer to state and national averages.⁵ In 1999, the average Texas border city per capita income was \$14,737, compared with \$26,266 for Texas and \$27,859 for the nation. As a result, border poverty rates are well above the national average, and the perception of the border is one of chronic poverty.

What gets less attention, however, is that a large share of the income differential can be explained by the demographic characteristics of the border population. About 86 percent of the border's (urban) population is of Hispanic origin, compared with 32 and 12 percent in Texas and the United States, respectively. If instead of comparing the average border income with the national average, we compare the average border income with the average income of Hispanics in the United States, the income differences disappear. According to 2000 census data, self-reported income per household member among Hispanics is \$12,271, compared with \$25,318 among non-Hispanic whites. This is only a rough comparison, but it illustrates the point that border income per capita is not markedly lower than elsewhere once

sociodemographic factors are held constant.

On the other hand, explaining income differences by simply stratifying on ethnic origin does not get to the underlying reasons why border incomes are lower. Border households are not only more likely to have larger families, but they are also younger on average—relatively young people who have not yet reached their full earnings potential. Other factors contributing to lower incomes are low rates of labor force participation, low education levels, elevated school dropout rates and large shares of the work force that are foreign-born and have limited English fluency. Another reason incomes on the border are low is because of the large population of migrant workers, especially in the Rio Grande Valley. Migrant workers travel to the Midwest and Southeast during the growing season. Their out-of-state earnings are not captured by the border income statistics used here, leading to a downward bias in measured income.

Moreover, due to the lack of skilled workers, few high-paying industries locate on the border.⁶ Traditionally, this region has drawn firms seeking low-skilled workers, such as the apparel industry in El Paso or, more recently, call centers in the Rio Grande Valley. The agricultural sector, characterized by relatively low earnings and only seasonal

work, further depresses border per capita income.⁷

How Were the Border Gains Achieved?

Historically, the border economy's success or failure has depended on the strengths and weaknesses of the much larger economies surrounding it. The U.S., Mexican and Texas economies have alternated in the role of savior and villain on the border. Of the four border recessions since 1980, two have been the result of recessions in all three economies (1982, 2001), one was just Mexico and Texas (1986) and one—the 1995 Tequila Crisis—was uniquely Mexican.⁸ Chart 6 illustrates the extent to which year-over-year border job growth fluctuated with the U.S., Texas and Mexican economies over this period. Again, the various border cities have fared differently during the business cycles. Before the late 1990s, Laredo employment growth was the most procyclical by far, averaging a 6 percent job loss in the recession years of 1982, 1986 and 1995. In the most recent recession, however, El Paso has been hardest hit.

With all three economies growing rapidly, particularly after 1995, it may not be surprising that the border made substantial economic progress in the late 1990s. Notwithstanding, two things were

very different this time around: free trade and Mexico's macroeconomic stability. When Mexico opened its economy to trade by joining the General Agreement on Tariffs and Trade (known then as GATT and now as the World Trade Organization or WTO) in 1986 and later NAFTA in 1994, Mexico-U.S. trade grew in volume and underwent rapid compositional change as well. Both developments benefited the border economy.⁹ The increased volume of two-way trade is processed on the border, not only by U.S. and Mexican customs and many other government agencies, but also by transporters, freight forwarders, customs brokers, insurance agents, bankers and bridge operators. It is difficult to imagine any business not directly or indirectly affected by international commerce on the Texas-Mexico border.

The compositional change in Mexican exports, from raw materials such as silver and coffee to manufactured products such as auto parts and electronics, has also benefited the border by leading to more rapid employment growth in maquiladoras. Most maquiladoras are located just across the border in the Mexican sister cities of Matamoros (Brownsville), Reynosa (McAllen), Nuevo Laredo (Laredo) and Ciudad Juárez (El Paso). Maquiladora employment in these cities increased 83 percent on average during the 1990s.¹⁰

Given the cross-border interdependencies in retail, banking, insurance and real estate, rapid job and earnings growth on the Mexican side leads to greater demand for these goods and services on the U.S. side.

Although all border cities have benefited from liberalized trade with Mexico and the growth of maquiladoras, their individual experiences have been quite different. For example, McAllen's proximity to the third-largest city in Mexico—Monterrey—and the phenomenal maquiladora expansion in McAllen's sister city, Reynosa, both fueled McAllen's growth spurt. Laredo, through its unique location along what is dubbed the NAFTA super-highway, currently processes 40 percent of land-based trade with Mexico. U.S.-Mexico trade grew an average of 12 percent per year between 1990 and 2000, spurring Laredo's growth. Brownsville, strategically located on the Gulf of Mexico with both a seaport and a tourism industry, has similarly gained from the growth in U.S.-Mexico trade and the inflow of Mexican shoppers.

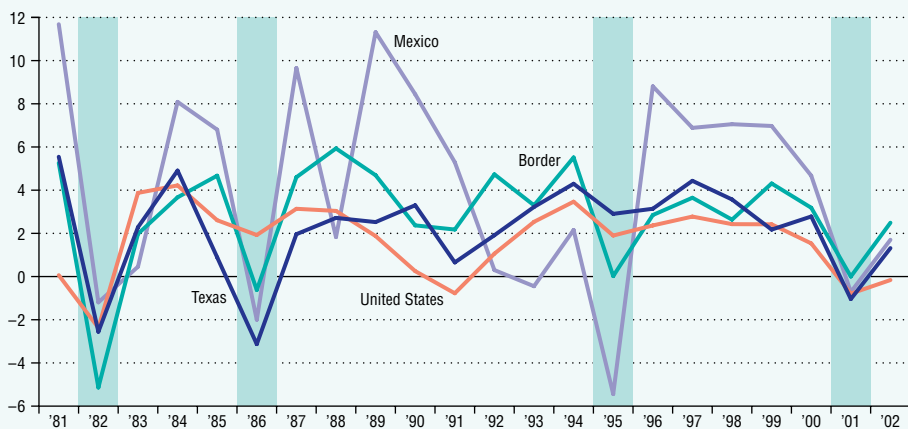
El Paso is a slightly different case. With 40 percent of manufacturing employment in the apparel industry before 1994, the city's economy was vulnerable to NAFTA's reduction of tariffs on apparel from Mexico. In light of this, El Paso's relatively weak job performance in the 1990s (compared with the other border cities) is actually impressive. El Paso has undergone a structural change over the past decade, largely driven by consumers and industries in Ciudad Juárez.¹¹

Mexico's Macroeconomic Stability and the Strong Peso. One positive outcome of Mexico's 1995 recession was a commitment to a stable macroeconomy and the switch to a floating-exchange-rate regime.¹² Such a regime does not remove the possibility of a currency's depreciation, but it does make large and sudden devaluations more rare. Mexican devaluations have devastated the border economy many times in the past. Now, however, the exchange rate regime is accompanied by an inflation-fighting central bank. Together with NAFTA-induced increases in foreign direct investment, particularly in the maquiladora sector, these changes have led to a remarkably strong Mexican peso in the years after the Tequila Crisis.

Chart 6

Border Recessions Driven by Surrounding Economies

December-over-December employment growth (percent)



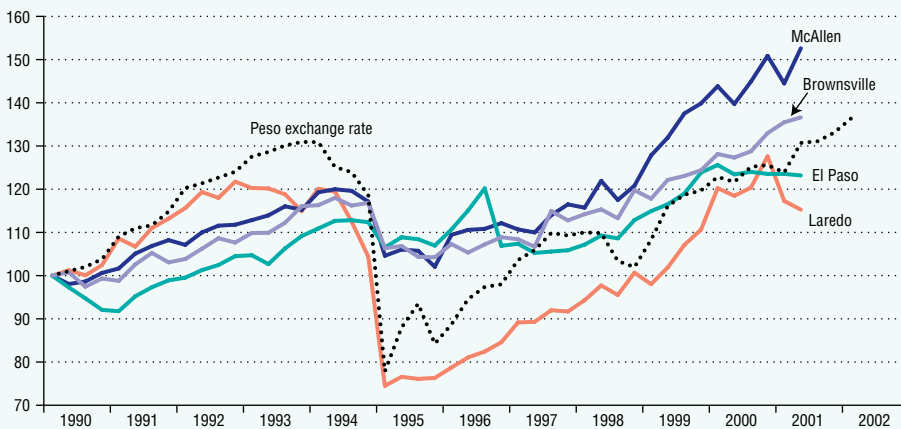
NOTES: Data for 2002 are March-over-December, annualized. Border includes Brownsville, El Paso, Laredo and McAllen. Shaded areas indicate border recessions.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; Instituto Nacional de Estadística Geografía e Informática.

Chart 7

Border Retail Sales Vary with Peso Strength

Real index, 1990:1 = 100*



* Seasonally adjusted.

SOURCES: County level data from Texas Comptroller of Public Accounts; International Financial Statistics; Federal Reserve Bank of Dallas.

The strong peso is another underlying reason for improvement in the Texas–Mexico border economy. Despite the recent economic slowdown, the peso has not weakened much and continues to play a vital part in the border boom. Because the peso directly affects the purchasing power of Mexicans, which in turn influences the demand for U.S. goods and services, its importance to the border economy cannot be overemphasized.

The peso’s strength has the most direct impact on U.S. border retail sales. Moreover, the manner in which the retail sales level varies with the peso–dollar exchange rate is a good measure of the Mexican consumer’s influence on the border economy. As Chart 7 demonstrates, retail sales in all four border metros dipped sharply in 1994–95 as a result of the Tequila Crisis devaluation. The downturn in the retail sector was particularly severe in Laredo. The 60 percent decline in the peso’s value between January 1994 and December 1995 significantly diminished Mexicans’ purchasing power.

However, starting in early 1996, retail sales began to grow again and, with the exception of Laredo, have surpassed their pre-1995 levels. As the largest city on the border, El Paso has the highest county retail sales. McAllen has the second highest and the fastest-growing. In addition, McAllen leads in “exported” retail sales—sales to Mexican nationals—largely as

a result of its proximity to Monterrey, home to nearly 4 million people.¹³

Will Border Economic Growth Be Sustained?

In the past, border booms have often come to an abrupt halt. The 2001 recession, however, does not seem to threaten the ongoing border expansion. This is due to fundamental improvements in the underlying determinants of border economic growth as discussed above—such as macroeconomic stability in Mexico and liberalized trade. Nonetheless, serious challenges still confront the border economy. Simultaneous changes in the maquiladora outlook, security measures in the wake of September 11 and impending truck safety inspections will all pose challenges for continued growth and progress.

The peso’s strength, although a positive development in many ways, has put more pressure on maquiladoras to save on labor costs, perhaps by reducing employment by more than they would if the peso were weaker or slowly depreciating. A strong peso increases the relative cost of Mexican labor and makes labor-intensive Mexican producers less competitive. In addition, although the 2001 recession has been mild by both U.S. and Mexican standards, it nonetheless led to record layoffs in the maquiladora industry. As of January 2002, 240,000 maquiladora workers had lost their jobs

in the previous year. This represents a loss of 19 percent of total maquiladora employment in just one year.

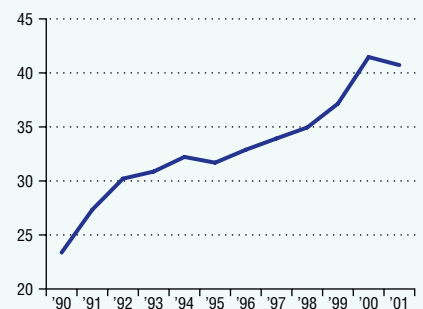
Even as the economic recovery takes hold, there is speculation that not all maquiladora workers who have lost their jobs will be rehired. Anecdotal evidence suggests that producers are taking advantage of the downturn to make changes that will make them more competitive: upgrading to less labor-intensive technology, expanding farther south in Mexico (away from the border) or even relocating to lower-wage countries in Central America and Asia. All these changes imply slower job growth on the Mexican side of the border with some coincident negative effects on the U.S. side as well.

Another risk to the border economy prognosis is the crossing delays caused by continued security measures as a result of the September 11 attacks. Security measures implemented immediately following the attacks virtually halted cross-border traffic. As random vehicle checks were replaced by universal searches, wait times doubled and tripled. At the time of the terrorist attacks, vehicle crossings were already down due to the recession, after rising steeply throughout the 1990s (Chart 8). After the attacks, crossings dropped further. The falloff in vehicle crossings entailed a drop-off in the total number of northbound cars, trucks and people. This, in turn, had a negative impact on U.S. border cities for all the reasons previously mentioned.

Chart 8

Northbound Border Vehicle Crossings Grow in 1990s

Number of vehicles (in millions)



NOTE: Crossings are through Brownsville, Del Rio, Eagle Pass, El Paso, Harlingen, Laredo, McAllen–Hidalgo, Presidio, Progreso, Rio Grande City and Roma.

SOURCE: Texas A&M International University.

The drop-off in northbound crossings is perhaps best illustrated in El Paso, where the recession has had a slightly bigger impact than in the other border cities. As Chart 9 shows, northbound border crossings in El Paso fell drastically in spring 2001 and then again in September. The decline in crossings seems highly correlated with maquiladora layoffs, but given the drop in September crossings and the lack of a rebound, security checks and ensuing waits have also played an important role.

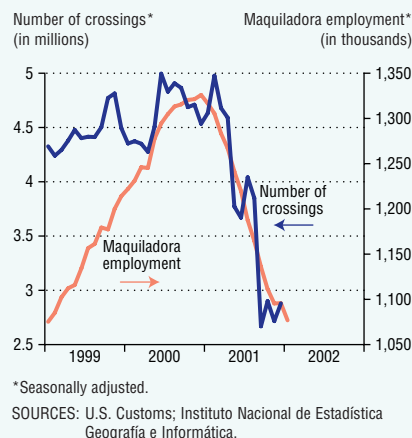
It bears mentioning, however, that further complicating border crossings last fall was the required switch to a new high-tech border-crossing pass, a so-called laser visa, for Mexican commuters. Many border crossers missed the deadline for the conversion or simply could not afford the \$45 fee. The result was confusion and fewer total crossings. Taken together, these various factors have had a negative impact on U.S. border economies like El Paso's. The extent to which retail sales have held up has been primarily due to the peso's strength and to economizing Mexicans who now make fewer trips and buy more on each trip.

A final upcoming challenge on the border is the NAFTA trucking agreement scheduled to come into effect this summer. Although the law is designed to make cross-border trucking less cumbersome by allowing Mexican trucks into the U.S. interior, the law also mandates extensive truck safety inspections and stringent requirements for drivers. Truck safety inspection stations are going up all along the border. These stations are to be placed on the actual border and not at the perimeter of the border commercial zone (typically 5 to 20 miles from the Rio Grande). Northbound short-haul trucks will probably be inspected along with Mexican long-haul trucks.

Given the prominent use of short-haul carriers for brief cross-border trips, and considering that these vehicles are often older and more worn, there is concern that the inspections will cause longer lines, delays and more congestion at border crossings. The U.S. Department of Transportation has already said, however, that if an inspection facility becomes backed up with out-of-service vehicles, they will close the facility until it is free again to do more inspections.

Chart 9

El Paso Border Crossings Decline Sharply as Maquiladora Employment Falls



In the medium to long run, the new law and the safety inspections will be positive developments on net—bringing border trucks up to code and lowering the cost of cross-border trade by eliminating some of the short-haul industry. In cities such as Laredo, however, more streamlined trade will mean less need for transportation services and warehousing. These sectors have been big drivers of the Laredo economy.

Conclusion

The Texas–Mexico border economy did well in the 1990s. Border residents saw greater employment opportunities, improved earnings potential and higher incomes. Texas border cities grew in size and scope. This time, growth was based on good fundamentals—a sound Mexican economy and North American free trade—that should secure future growth as well. The border will see more changes: slower population and job growth on the Mexican side of the border, tighter security and inbound Mexican long-haul trucks. These changes can be positive if, for example, slower population growth translates into higher living standards, if tighter security is implemented through better technology that does not extend border crossing times, and if streamlined trucking increases the flow and efficiency of U.S.–Mexico trade.

Other developments not detailed in this article played a vital role in border well-being during the 1990s—increased

access to affordable housing, improved health care, and more well-funded schools and colleges. The border's future must include continued investment in the human capital of border residents through an emphasis on access to these services, most importantly education and job training. In the long run, raising income to state and national levels can only be achieved by upgrading the skills of the border's work force.

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Notes

The authors would like to thank Keith Phillips for sharing his insights on this topic and providing valuable comments.

¹ For more details on border earnings growth, see Eric Dittmar and Keith Phillips, "Border Region Makes Progress in the 1990s," Federal Reserve Bank of Dallas *Vista*, December 1999.

² In 1999, average earnings per job by sector were as follows: federal civilian government \$62,925; mining \$39,738; transportation \$34,344; wholesale trade \$32,152; state and local government \$30,506; FIRE \$27,740; manufacturing \$27,097; services \$20,800; construction \$20,659; retail trade \$17,057. Earnings include wages and salaries, other labor income (mostly benefits) and proprietor's income. Averages are by job (not by individual) and may understate individual earnings since some workers hold more than one job.

³ Jesus Cañas also touches on growing Mexican demand for U.S. bank and insurance services along the border in "A Decade of Change: El Paso's Economic Transition of the 1990s," Federal Reserve Bank of Dallas *Business Frontier*, Issue 1, 2002.

⁴ See Toby Cook, "Housing Affordability: Outlook Improving Along the Border," *The Border Economy*, Federal Reserve Bank of Dallas, June 2001.

⁵ See Robert W. Gilmer, Matthew Gurch and Thomas Wang, "Texas Border Cities: An Income Growth Perspective," *The Border Economy*, Federal Reserve Bank of Dallas, June 2001.

⁶ See Lori Taylor, "The Border: Is It Really a Low-Wage Area?" *The Border Economy*, Federal Reserve Bank of Dallas, June 2001.

⁷ An alternative approach to comparing income, which gets away from issues such as family size and labor force participation, is to look at average earnings per job, much as Dittmar and Phillips do in the article mentioned in Note 1. In 1999, border earnings per job were about 70 percent of the national average.

⁸ A border recession is loosely defined in this context as a year of zero or negative employment growth.

⁹ For more details on the change in U.S.–Mexico trade, see Pia Orrenius, Keith Phillips and Benjamin Blackburn, "Beating Border Barriers," Federal Reserve Bank of Dallas *Southwest Economy*, Issue 5, September/October 2001.

¹⁰ Between 1990 and 1999, maquiladora employment grew 161 percent in Reynosa, 79 percent in Ciudad Juárez, 54 percent in Matamoros and 37 percent in Nuevo Laredo.

¹¹ See the article mentioned in Note 3.

¹² Other beneficial reforms included a liberalized banking sector allowing foreign ownership of Mexican banks.

¹³ For more on exported retail sales, see Keith Phillips and Carlos Manzanera, "Transportation Infrastructure and the Border Economy," *The Border Economy*, Federal Reserve Bank of Dallas, June 2001.

A Dose of Market Discipline: The New Education Initiatives

(Continued from front page)

short of its potential. Despite decades of increased spending on schools, students continue to perform below expectations. Nearly 70 percent of fourth graders have fallen so far behind in reading that they may never catch up. On international tests of student achievement, U.S. high schoolers are among the weakest in the world. (See the box titled “International Comparisons of Student Performance.”) Thousands of public schools have been identified as failing, and hundreds of thousands of graduates must pursue remedial classes before they are ready for college.

The federal government has limited responsibility for the public school system. Public schools are, by design, a state and local affair. On average, federal funding represents less than 7 percent of public spending on primary and sec-

ondary schooling (Chart 1). The federal share ranges from less than 4 percent in New Jersey, New Hampshire and Connecticut to more than 14 percent in Mississippi and the District of Columbia. Much of the federal aid is directed at schools that serve economically disadvantaged populations and therefore is concentrated in urban and poor rural areas.

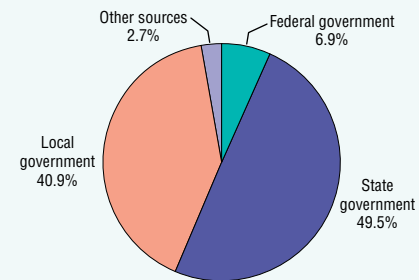
Despite the federal government’s limited role, changes in its policy have the potential to greatly alter the educational environment. To the extent that the new reforms rely on market forces, they leverage a small financial position into a significant force for change.

Lifting the Veil

The centerpiece of the education initiative is a vast new accountability sys-

Chart 1

Federal Spending on Public K–12 Education a Small Part of the Total



SOURCE: U.S. Census Bureau, Annual Survey of Government Finances, 1998–99.

tem. The NCLBA requires all states to develop and administer student exams in math, reading, science and any other subjects the state deems appropriate. The exams should be challenging, rigorous and aligned with the curriculum, so that teaching to the test means teaching the material the state has identified as appropriate for the grade level.

Math and reading exams will be administered every year in every grade from third through eighth and at least once at the high school level. Science exams will be administered at the elementary, middle and high school levels. Provided that the federal government foots the bill, states will also be required to participate in the state version of the National Assessment of Educational Progress, an evaluation of fourth and eighth graders that is conducted every other year.

Crucially, the states must not only test, they must publish the results at the state, district and school levels. These annual report cards must be concise and presented in language that parents can understand. At all levels, the report card must break out information on the performance of low-income students, minority students, special education students and students with limited English proficiency.

Other provisions of the NCLBA also increase the public’s information about schools. At parents’ request, for example, districts must provide information on the educational background and professional qualifications of each classroom

International Comparisons of Student Performance

Since the 1960s, U.S. students have participated in a variety of international exams. The most recent such exam, the Third International Mathematics and Science Study (TIMSS), was administered in 1995 (with a follow-up for eighth graders in 1999). As had been the case with all previous international exams, U.S. performance at the high school level was well below the international norm. Only Cyprus and South Africa had math or science scores significantly lower than the U.S. average (see the lists below).

Some try to dismiss the poor U.S. showing by arguing that other countries test only their best students. However, the TIMSS was administered to would-be seniors, whether in school or not. With the exception of Denmark and Iceland, all the countries that scored better than the United States also tested a greater percentage of their 17 or 18 year olds than the United States did. Furthermore, restricting the sample to only the best students in each country (the top 25 percent of the eligible age group) does nothing to improve our standing. All the countries that score better than the United States in the full sample also score better than the United States in the restricted sample.

Significantly better than the United States in both math and science

Netherlands
Sweden
Denmark
Switzerland
Iceland
Norway
Australia
New Zealand
Canada
Austria
Slovenia

Significantly better than the United States in math but comparable in science

France
Germany
Hungary

Comparable to the United States in math and science

Italy
Russian Federation
Lithuania
Czech Republic

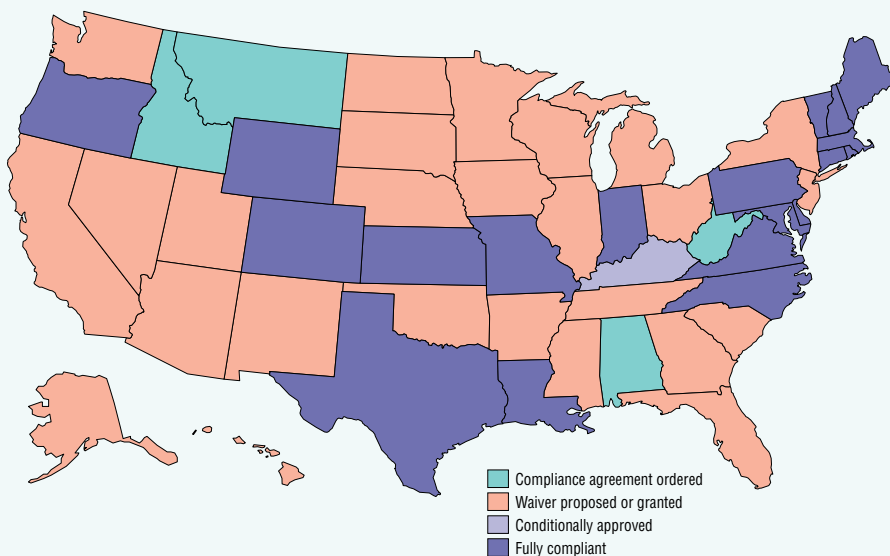
Significantly weaker than the United States in math and science

Cyprus
South Africa

SOURCE: “Mathematics and Science Achievement in the Final Year of Secondary School: IEA’s Third International Mathematics and Science Study (TIMSS),” TIMSS International Study Center, Boston College, February 1998.

Chart 2

States Meeting School Accountability Standards



SOURCE: U.S. Department of Education, Office of Elementary and Secondary Education.

The simple act of publishing information about student performance should have a positive impact on school quality.

teacher. In particular, schools are required to provide “timely notice that the parent’s child has been assigned...a teacher who is not highly qualified.” In this context, a highly qualified teacher is fully certified by the state, has at least a bachelor’s degree and has either passed a rigorous test demonstrating knowledge in the relevant subjects or has an academic major, graduate degree or advanced certification in each subject taught.¹

The NCLBA will generate a significant increase in consumer information. A 1994 law requires states to test and publish the results, but a student is tested only once at each level—elementary, middle and high school. Furthermore, as of April 2002, only 19 states were fully compliant with the law, leaving most parents and voters ill-equipped to monitor their schools (*Chart 2*). With the NCLBA, all states must meet the 1994 requirements immediately (no more waivers will be granted) and must meet the new, broader testing requirements by the 2005–06 school year (2007–08 for science).

The simple act of publishing information about student performance should have a positive impact on school quality. Voters and parents will be better able to monitor their schools and take corrective action. Schools and teachers will be

better able to identify their high-performing peers and follow their lead. Research suggests that schools are much more effective when it is easier to monitor their behavior and that informing professionals about the best practices of their peers encourages them to adopt those practices.

Unfortunately, it may be difficult to identify high-performing schools and school districts from the mandatory report cards. The NCLBA requires that states and school districts publish information about the average performance of various student groups. However, most researchers believe that performance levels are flawed indicators of school effectiveness. Instead, researchers favor an indicator of the gain in student performance, preferably one that separates the school’s influence on learning from the influences of parents and peers. The intuition behind this position is clear. Some schools will post high average reading scores because they have an advantaged student body, while other schools will post high reading scores despite a disadvantaged student body. Both have high-performing students, but only the latter is a high-performing school.

The NCLBA’s requirement that report cards break out information on groups such as low-income students is not suffi-

cient to address this concern. Chart 3 plots the average reading performance of low-income sixth graders in Texas schools against a measure of the average gain in reading performance for those same students. While the two measures of performance are correlated, the relationship is not especially close. Dozens of schools appear to be high performing on the basis of average scores but fall to no better than average once differences in student preparation and demographics are taken into account.

Nothing in the NCLBA prevents states and school districts from providing additional information about performance gains. However, implementing a system of value-added measurement requires tracking students from one year to the next. For example, as students change schools, there must be a mechanism for matching their fifth-grade scores in one school with their sixth-grade scores elsewhere in the state (or ideally, the nation). Some states, such as Texas, already have the mechanism in place. To fully benefit from the NCLBA's testing requirements, other states will need to go beyond the law's minimum mandates.

Carrots and Sticks

In addition to empowering through information, the accountability system enables the federal government to introduce a variety of carrots and sticks. Schools and states that show significant progress from one year to the next can receive federal bonuses.

On the other hand, states must define "adequate yearly progress" so that all students are expected to improve and in 12 years all students meet the state's standard for proficiency. Schools that do not show adequate progress for two consecutive years will be flagged as failing. States will get extra federal money to use to turn them around, but at the same time school districts must offer transfers and free transportation to students in failing schools so they can attend better schools within the district. If it is impossible to offer a place at a better school to all students from a failing school, districts must give priority to low-income students. If all schools in a district are failing, the district must try to arrange places for its students in other districts, but other districts are not obliged to accept the stu-

dents. The NCLBA makes no provision for private school choice.

After a school has three consecutive years of inadequate progress, the district risks losing federal money. Districts that receive federal aid for low-income students must make supplemental educational programs available to low-income children at the failing schools. These supplemental programs (such as after-school programs like those offered by Sylvan Learning Centers) must be in addition to regular instruction and must be provided by an organization with "a demonstrated record of effectiveness." Churches, charities, for-profit firms and successful school systems are all eligible providers of supplemental educational programs, which will be financed by redirecting the federal aid districts receive for low-income children.

Failure that persists for more than three years triggers mandatory reforms in addition to the public school choice and supplemental education provisions. These reforms range from curriculum changes to replacement of local management with an outside private firm or a complete state takeover of the school.

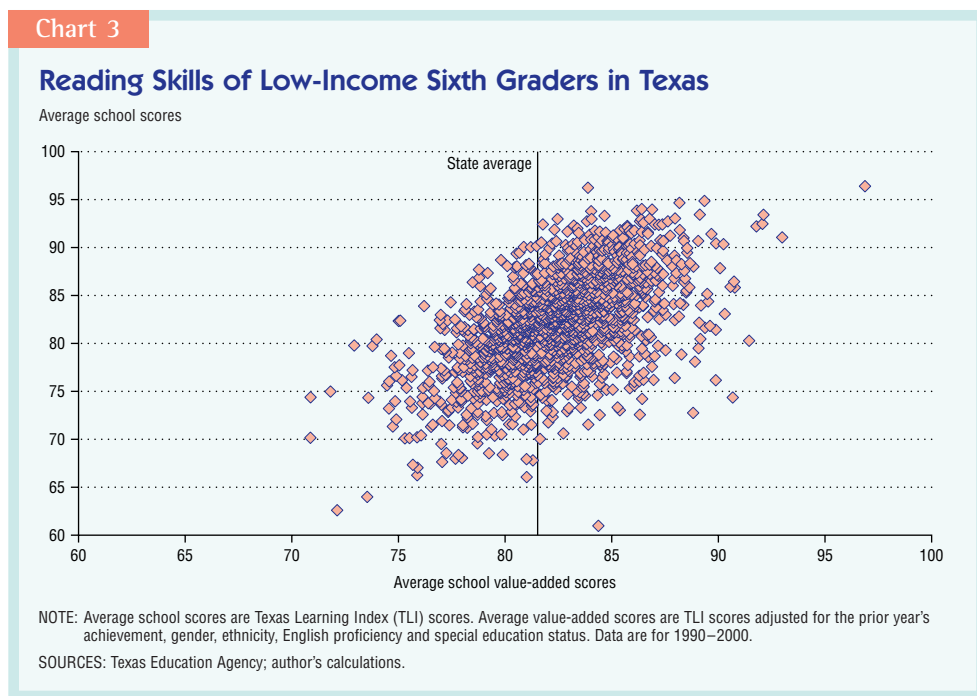
Ideally, the NCLBA's requirements for public school choice would foster educational competition, thereby inducing improvements in satisfactory schools as well as unsatisfactory ones. But given

that districts are only required to transfer students among their own schools, the competitive impact of the choice provisions is likely to be muted. To the extent that schools within a district compete with one another for enrollment and revenue, the choice provisions will increase competition. In districts with limited school-level autonomy, the choice provisions may offer little more than an escape hatch for some of the children trapped in failing schools.

Other Provisions

The NCLBA has a number of other provisions in addition to the accountability system and its ancillary incentives. It increases federal support for a variety of programs, ranging from test development and reading initiatives to teacher training and technology centers. Funding the NCLBA will cost approximately \$22 billion per year, nearly 18 percent more than the prior program.²

In exchange for accountability, the NCLBA also cuts some of the red tape that Washington had tied to federal money. Although considerable complexity remains, funding programs have been consolidated and streamlined. States and school districts that meet performance objectives are granted more flexibility than those that don't. For example, the NCLBA permits states and districts in good stand-



Relying heavily on market forces allows the federal government to leverage its relatively small role in elementary and secondary education into a more powerful force for change.

ing to transfer a portion of the funds they receive under certain federal programs (such as the Teacher and Principal Training and Recruiting Fund) into other programs (such as state and local technology grants) in order to better serve their needs. The increased flexibility should make it easier for schools to respond to the new incentives. All the competition and accountability in the world are meaningless if schools don't have the authority to make changes.

Education IRAs

Another educational provision became law as part of last year's tax relief act rather than the NCLBA. Parents and other interested parties may make after-tax contributions to Coverdell Education Savings Accounts, or education IRAs. Starting with the 2002 tax year, the contributions to each child's education IRA can total \$2,000 per year (up from \$500 in 2001). The contributions and interest accumulate over time and can be withdrawn tax-free for any legitimate educational expense. Previous incarnations of the education IRA excluded expenses for elementary and secondary education, but those restrictions are now gone. Parents can use the accounts to cover private school tuition or the cost of supplies and curriculum materials for home schooling.

The greatest beneficiaries of education IRAs are parents in the top income tax brackets. Not only are they more likely to contribute the full amount each year, but the tax savings on the accumulated interest are greater for people in the 38.6 percent tax bracket than for people in the 10 percent tax bracket. Low-income parents who pay no income tax receive no direct benefit from education IRAs.

The public school system as a whole can benefit from the expanded education IRAs if they foster an increase in competition among schools. Almost across the board, researchers have found that competing with other education providers to attract or retain students makes public schools better.³ Public school students from areas where there are many education providers score higher on standardized tests, complete more years of schooling and earn higher wages after they finish school. Meanwhile, per pupil expenditures by public schools are sub-

stantially lower in states and communities where there are more districts to choose from. In other words, competition forces districts to get more bang for their buck.

Unfortunately, given the relatively small magnitude of the individual tax breaks, education IRAs are unlikely to change parental behavior much, especially over the near term. With the exception of parents teetering on the brink of sending their children to private schools, the primary beneficiaries of the expanded IRAs are parents who were going to send their kids to private school anyway. If the policy doesn't at least threaten to change enrollment patterns, it doesn't increase the competitive pressure.

The Tail That Wags the Dog

The Bush administration is relying heavily on market forces to improve school quality. Its initiatives provide consumers with substantially more information about public schools and provide a small boost to competition among schools. Such a strategy allows the federal government to leverage its relatively small role in elementary and secondary education into a more powerful force for change. In addition, provisions offering flexibility in exchange for accountability represent a subtle but important shift from a system that tries to manage the educational process to one that emphasizes results. Although they could be bolder, the new education initiatives should improve America's schools.

—Lori L. Taylor

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Notes

¹ To be deemed highly qualified, a teacher must not have any certification requirements waived on an emergency, temporary or provisional basis.

² The NCLBA amends the Elementary and Secondary Education Act (ESEA). ESEA, which was enacted in 1965, is the primary federal law affecting K-12 education and the source of most federal support for education.

³ For further discussion, see Lori L. Taylor, "The Evidence on Government Competition," Federal Reserve Bank of Dallas *Economic and Financial Review*, Second Quarter 2000.

China's Growing Economic Influence in East Asia after WTO

China's accession to the World Trade Organization on Dec. 11, 2001, together with the 1997 Asian financial crisis and Japan's decade-long economic slump, have begun to change East Asia's economic landscape. China will play a key role in determining the outcome of those changes if for no other reasons than its sheer size and speed of economic expansion.

In dollar terms, China's economy is about 10 percent of the United States' economy, 20 percent of Japan's. However, after adjusting for differences in cost of living (purchasing power parity adjustments), China's economy is more than half as large as the United States', surpassing Japan to become the world's second largest economy. It grew 7.3 percent in 2001 and an average 9.1 percent annually between 1980 and 2000. China expects its economy to grow at an annual rate of 6 to 7 percent over the next 10 years.

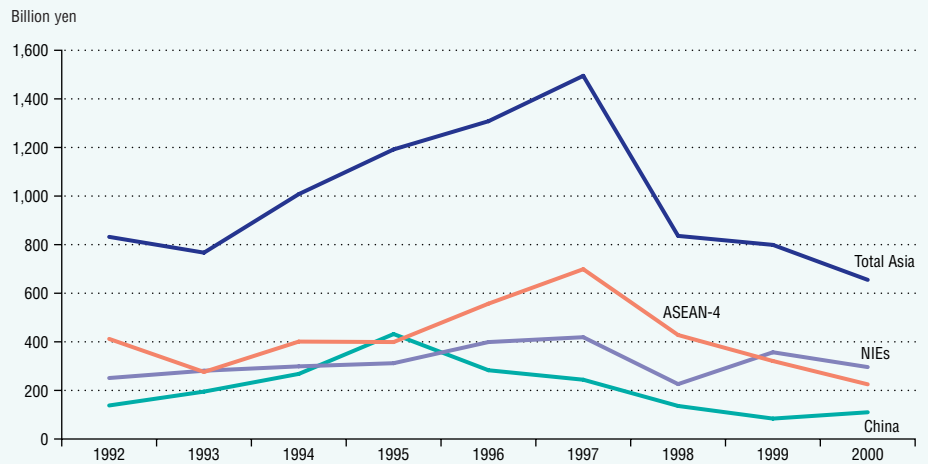
This projected growth will require further openness of trade and investment as well as continuing economic reforms. In joining the WTO, China agreed to lower its average tariff from 16.7 percent in 2000 to 10 percent in 2005 and reduce the number of items under import license and quota from approximately 300 to zero in the next five years. China is also liberalizing foreign investment in banking, insurance, financial services, wholesale/retail trade and telecommunications. All these industries have been under tight governmental control until recently.

Southeast Asia

These initiatives have altered regional investment patterns, particularly those of the Association of Southeastern Asian Nations (ASEAN).¹ In 2000, China (including Hong Kong) received 80 percent of total foreign direct investment into the major East Asian countries (excluding Japan), up from 62 percent in 1995. In contrast, major ASEAN countries received

Chart 1

Japanese Direct Investment in Asia



NOTES: ASEAN-4 includes Indonesia, Malaysia, Philippines and Thailand. NIEs (newly industrialized economies) include Hong Kong, Korea, Singapore and Taiwan.
SOURCE: Ministry of Finance, Japan.

only 9 percent of the total in 2000, down from 33 percent in 1995.

Three factors can explain this turn of events. First, the 1997 Asian crisis negatively impacted local business environments in ASEAN economies. Second, Japan failed to continue investing in the region due to its own financial problems (Chart 1). Third, improved business

opportunities in China during the past two decades, consummated by the WTO accession, are attracting foreign investment away from ASEAN.

Meanwhile, China's trade with ASEAN has increased rapidly, and most ASEAN countries now have a trade surplus with China (Table 1). This trade is generally intra-industry. The devaluation of some

Table 1

Japan and China's Share in East Asian Countries' Exports

	Exports to Japan (percent)			Exports to China (percent)		
	1990	1995	2000	1990	1995	2000
Korea	18.6	13.6	11.1	5.6	15.3	17.8
Singapore	8.7	7.8	7.5	8.0	10.7	11.8
Indonesia	42.5	27.0	23.2	5.7	7.5	7.0
Malaysia	15.3	12.5	13.0	5.3	7.9	7.6
Philippines	19.8	15.8	14.6	4.8	5.9	6.7
Thailand	17.2	16.6	15.7	5.7	8.0	9.6

NOTE: Exports to China includes Hong Kong.
SOURCE: "Directions of Trade," International Monetary Fund.

ASEAN currencies in conjunction with China's fixed exchange rate helped expand ASEAN exports. As China becomes more willing to open its agricultural market, closer trade relations are more likely. Last November, ASEAN and China called for developing a free trade area over the next 10 years. The enhancement of the ASEAN–China trade relationship contrasts sharply to the weakening trade ties between ASEAN and Japan (*Table 1*).

Taiwan

Another change in the economic landscape, gradual but assured, is taking place between Taiwan and mainland China. Despite Taiwan's internal political turmoil and the cross-strait tension, Taiwan and mainland China are beginning to integrate economically. Taiwan's export dependence on mainland China reached 17 percent in 2000 (24 percent if counting Hong Kong). The trade is highly unbalanced, as Taiwan accumulated a \$172 billion surplus between 1987 and 2001. Between 1991 and 2000, 39 percent of Taiwan's overseas investment went to mainland China. On the other hand, 7 percent of mainland China's contracted foreign direct investment came from Taiwan.

Cross-strait trade and investment have been hampered by the Taiwanese government's "patience over haste" policy toward mainland China. However, the two sides' consecutive WTO accessions and Taiwan's recent lift of a ban on direct trade and investment will eventually enhance these ties. As Taiwan's export-oriented economy now suffers from the global high-tech slowdown and Japan's stagnation, Taiwanese entrepreneurs are increasingly looking for capital outlets, production bases and export markets in mainland China.

South Korea

As one of the more technically advanced economies in East Asia, South Korea's response to China's accession to the WTO has been mixed, especially among government and business leaders. Korea established formal trade relations with China only 10 years ago. Now China (including Hong Kong) is already Korea's second largest export market following the United States (*Table 1*). Major Korean chaebols, or conglomerates, such as Sam-

sung and SK have aggressive plans to increase their investment in China. However, many Koreans fear that, in the near future, China will catch up to Korea's technology in semiconductors, shipbuilding, steel and electronics, thus encroaching on Korea's world market shares.

Given this concern, a free trade agreement between Korea and Japan—not China—may be more likely as a way to keep Korea's export-oriented economy afloat. The industrial structures of Korea and Japan are complementary. Both countries have such heavily protected agricultural sectors that the agricultural price differences between them are much smaller than the price differences would be compared with China or the major ASEAN producers.

Regardless of what may transpire, China's influence on Korea's economy will more than likely increase, considering the speed at which the two economies have integrated over the past 10 years.

Japan

Although China's economic integration with its neighbors has grown substantially, Japan, possessing the largest economy in the region, has yet to invest aggressively in China. Japan's direct investment in China has lagged behind its investment in other parts of Asia (*Chart 1*). Japanese companies have been very cautious about transferring technology to China. Meanwhile, Japan has a significant trade deficit with China.

The trade relationship has experienced conflict. Last year Japan threatened to use antidumping measures against Chinese agricultural products. China retaliated with a temporary 100 percent tariff increase on some Japanese products, including automobiles. The two sides finally compromised to avoid a trade war.

The recent depreciation of the Japanese yen has inflamed the debate as each country complains that the other is deliberately undervaluing its currency.

Despite its problems, Japan seems to be persisting in its efforts to maintain regional economic dominance. Nevertheless, ASEAN's trade and investment ties with Japan are loosening (*Chart 1, Table 1*). Japan's trade with ASEAN has traditionally been tied closely to investments. ASEAN countries in practice have

served as low-tech manufacturing units for Japan. Importing Japanese capital and intermediate goods and exporting final goods primarily to the United States and Europe have resulted routinely in trade deficits with Japan. Recently this imbalance has eased because Japan's domestic financial difficulties have caused it to invest less in the region and because the ASEAN currencies have been devalued, discouraging imports and encouraging exports.

To reinforce its ties with the region, Japan signed a free trade agreement with Singapore in January 2002. However, it seems unlikely that Japan's relationship with Singapore can be easily extended to other ASEAN countries. Because Japan is highly protective of its agricultural sector, the agreement excluded any reference to agricultural products. Singapore's agricultural sector is negligible, so Japan was able to bypass the agricultural issue. This will not be so easy when negotiating future free trade agreements with other ASEAN countries. These countries have much larger agricultural sectors than Singapore, making it more difficult to keep Japan's domestic agricultural market closed.

Since the Asian financial crisis, East Asia is changing. It is achieving marked economic cooperation and integration. The path of change is still uncertain, though, and will be influenced by political factors as well as economic conditions. Whatever developments occur, China is likely to have increasing economic influence in the region.

—Jahyeong Koo
Dong Fu

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Note

¹ The founding members of ASEAN are Indonesia, Malaysia, Philippines, Singapore and Thailand. Brunei, Vietnam, Laos, Myanmar and Cambodia joined later.

After three consecutive quarters of decline, Texas employment reversed course and grew at an annualized rate of 1.3 percent in first quarter 2002. Although employment is well below the trend established from 1998 through 2000, its growth was comparable with that achieved in first quarter 2001.

Most sectors showed signs of improvement from the fourth quarter, but growth rates across industries were uneven. Transportation, communications and public utilities (TCPU) experienced the sharpest reversal, going from an 11.2 percent decline in fourth quarter 2001 to a positive 1.3 percent growth in first quarter 2002. Air transportation accounted for most of the gain, as the industry began its recovery from the effects of September 11.

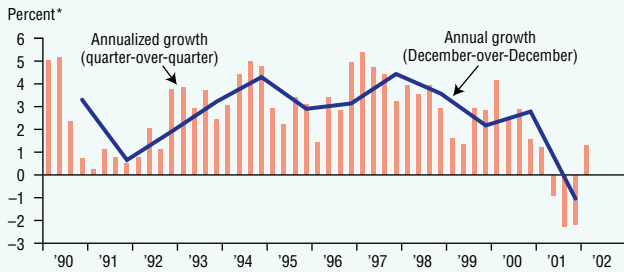
Three service-producing sectors—trade, services and government—drove first-quarter growth, collectively contributing

42,300 jobs. In contrast, durable goods manufacturing fell by 8,100 jobs. The finance, insurance and real estate (FIRE) sector is still shedding jobs, but generally less than last year. Overall, total job gains were a modest 30,900.

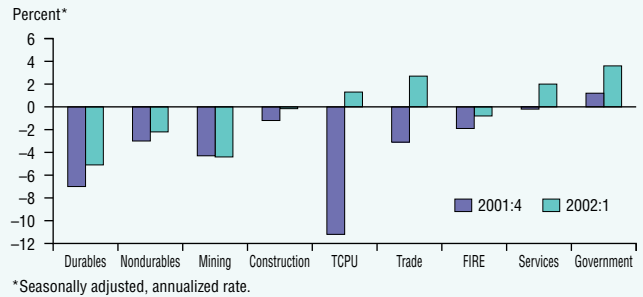
The most striking inconsistency in the Texas recovery is the unemployment rate, which rose by a tenth of a percent from fourth quarter 2001 to the current 5.8 percent. Because the unemployment rate is a lagging indicator of economic activity, such an increase is typical in the early stages of a recovery, when rises can reflect an increase in the number of job seekers and the extension of unemployment benefits. More encouraging evidence can be found in the initial claims for unemployment, which declined by a marked 9.2 percent from the previous quarter.

—Stephen Brown
Priscilla Caputo

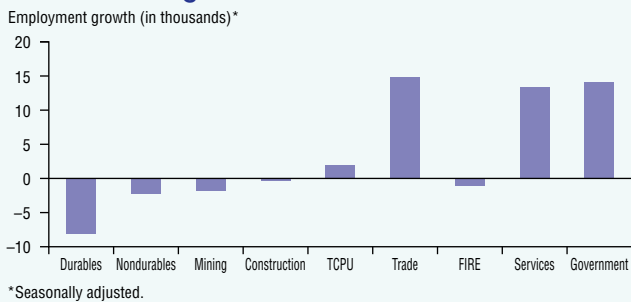
Texas Employment Grows in First Quarter



Employment Growth Rates Uneven During First Quarter



Service-Producing Sectors Drive First-Quarter Growth



Texas Unemployment Rate Steady in March



Regional Economic Indicators

TEXAS EMPLOYMENT*

	Texas Leading Index		TEXAS EMPLOYMENT*				TOTAL NONFARM EMPLOYMENT*			
	TIPI [†] total	TIPI [†] total	Mining	Construction	Manufacturing	Government	Private service-producing	Texas	Louisiana	New Mexico
3/02	116.0	—	160.1	559.6	1,014.2	1,611.3	6,117.3	9,462.5	1,922.8	762.7
2/02	114.6	125.6	160.8	559.4	1,018.0	1,606.7	6,113.9	9,458.8	1,922.9	762.9
1/02	114.9	126.7	161.7	561.1	1,024.8	1,603.4	6,112.3	9,463.3	1,926.1	762.2
12/01	114.3	125.4	161.9	559.7	1,024.5	1,597.2	6,088.3	9,431.6	1,925.5	758.3
11/01	114.9	126.8	162.7	559.4	1,027.9	1,594.4	6,101.5	9,445.9	1,925.7	758.1
10/01	113.6	127.1	163.0	559.0	1,033.1	1,592.7	6,111.3	9,459.1	1,926.7	758.5
9/01	114.8	129.8	163.7	561.4	1,038.9	1,592.4	6,127.3	9,483.7	1,924.0	756.3
8/01	119.6	130.6	164.5	564.0	1,047.6	1,584.3	6,148.4	9,508.8	1,928.2	756.3
7/01	118.6	131.5	164.1	561.7	1,053.0	1,584.9	6,144.7	9,508.4	1,925.4	756.4
6/01	118.9	131.5	164.2	565.6	1,063.0	1,584.2	6,161.0	9,538.0	1,927.0	757.5
5/01	119.8	131.0	162.7	567.8	1,070.1	1,578.8	6,173.6	9,553.0	1,927.6	757.3
4/01	118.8	131.0	161.3	567.5	1,075.3	1,576.6	6,172.7	9,553.4	1,927.4	755.9

* In thousands. † Texas Industrial Production Index.

For more information on employment data, see "Reassessing Texas Employment Growth" (*Southwest Economy*, July/August 1993). For TIPI, see "The Texas Industrial Production Index" (*Dallas Fed Economic Review*, November 1989). For the Texas Leading Index and its components, see "The Texas Index of Leading Indicators: A Revision and Further Evaluation" (*Dallas Fed Economic Review*, July 1990). Online economic data and articles are available on the Dallas Fed's Internet web site, www.dallasfed.org.

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