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Counting Illegal Mexican Aliens

Myths and Misconceptions

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The undocumented migration of foreign nationals to the United States has recently emerged as a serious national problem. Because the impact of illegal aliens on jobs and social services is related to the number of illegal aliens in this country, an accurate estimation of this number is particularly important. The impression conveyed by influential persons in the government and the media is that this number is so large—between six and eight million—that the time for study has long passed and that the present need is for immediate action.

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In fact, serious flaws in the assumptions that underlie the prevailing estimate cause it to be highly unreliable. Not only does the estimate heavily overstate the stock of illegal aliens, it also implies a misconception of the migration process itself.

The Lesko Report

The estimate of six to eight million illegal aliens evidently originated in an unpublished report prepared for the Immigration and Naturalization Service (INS) by Lesko Associates, a consulting firm in Washington, D.C. Released in October 1975, this report concluded that 8,180,000 illegal aliens were present in this country; 5,204,000 of these were Mexican. These estimates were quickly publicized by the media and seized upon by public officials anxious for information on which they could act. However,

little attention was paid to the methods by which these estimates were obtained.

Recently, the Lesko report has been disavowed by INS officials and by some experts on illegal migration. However, the reasons for abandoning these estimates remain as obscure as their origin. While critiques of the report exist, they circulate as unpublished memos or in private correspondence. Consequently, for want of a clearly articulated alternative, the six to eight million figure born in the Lesko report continues to influence public opinion.

The Lesko estimate implies a fundamental misconception of the migration process.

The Lesko estimate of the total illegal alien population was based upon a survey of the best guesses of experts in the field of undocumented aliens and yielded a range of estimates from 4.2 million to 11 million. We will evaluate only the estimate of the Mexican segment of the illegal alien population. On the basis of apprehensions, undocumented Mexican aliens comprise the largest group of illegal aliens; they are a group whose socioeconomic characteristics are distinct from other groups that enter with a visa; and they are the group about which the least is known regarding their numbers.

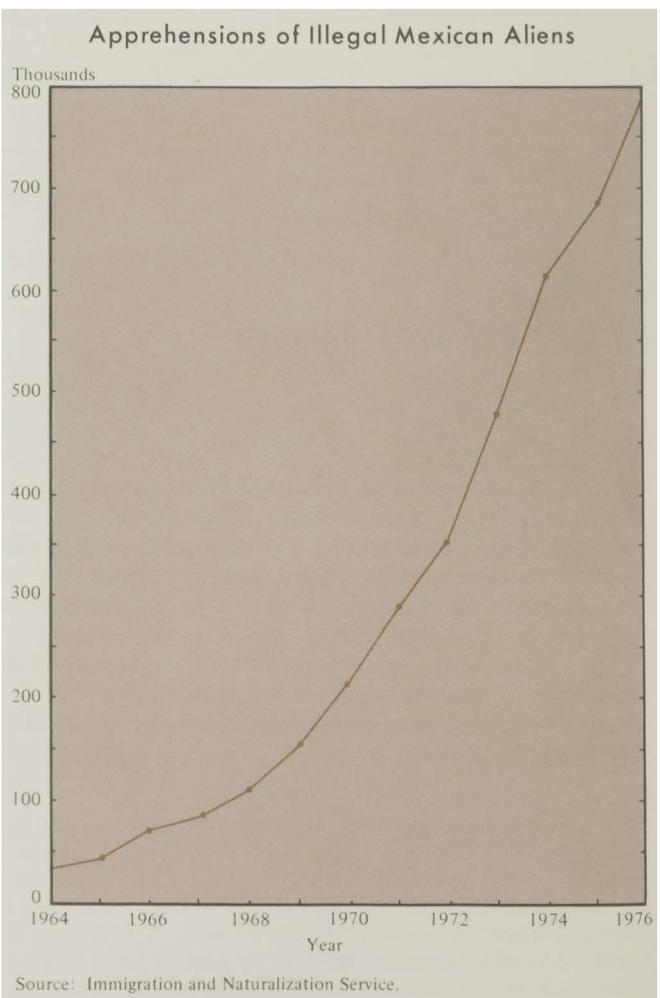
Estimating an unknown population is an inherently formidable task, especially if members of that population are trying to hide their presence. Two options are available to the researcher: to estimate the stock of unknown persons directly or to arrive at this figure indirectly through estimates of the net flows, or additions and subtractions, to an estimated beginning stock. Lesko Associates chose the latter method, beginning with an estimate of the 1970 stock of illegal Mexican aliens and adding the difference between entries and exits in each of the years subsequent to 1975. Because these magnitudes are not observed directly, the methods by which they are estimated become crucially important.

The Lesko estimate of the 1970 base-year stock was obtained directly from an unpublished paper by Howard Goldberg, who used the census survival-ratio technique to arrive at the number. He estimated the population that should be resident in Mexico in 1970, given the 1960 Mexican population and its rate of natural increase from 1960 to 1970. The population of the 1970 Mexican census was then subtracted from this estimated population, and the entire difference was assumed to have migrated to the United States during that ten-year period. From that number he subtracted the U.S. citizen population born in Mexico to obtain 1.597 million as the number of illegal Mexican aliens in the United States in 1970.

Entries of illegal aliens are assumed to be proportional to apprehensions at the border, based upon the notion that for every alien caught by the border patrol, several get away. The problem of estimating the annual inflow of illegal Mexican aliens reduces to finding the factor of proportionality between apprehensions and inflows. We will follow Lesko Associates and call this factor the "got-away ratio."

To estimate the got-away ratio, Lesko Associates first interpreted the number of illegal aliens apprehended in the interior of the United States as the minimum of the number who escaped apprehension at the border during that year. Then they scaled up this "minimum got-away ratio" by a constant factor to obtain the actual got-away ratio. The value of the constant factor was derived by calculating what its value would need to have been in the 1960s to result in the 1970 stock of 1.597 million.

The last unknown in the formula is the survival rate of Mexican migrants in the United States. This rate embodies both mortality and return migration to Mexico. As the mortality component of this parameter is small and can be established with existing data, derivation of the survival rate primarily entails an estimation of the return migration coefficient. Lesko's procedure for this estimation was to draw an analogy between Mexican return migration and the



Source: Immigration and Naturalization Service.

return migration of legal European immigrants to the United States, for whom data exist. The annual rate of European migration of 20 per 1,000 was then applied directly to the Mexican process and added to a mortality rate of 6.2 per 1,000. The result was an overall survival rate of .9738. Using these techniques, Lesko Associates derived an estimate of 5,204,000 illegal Mexican aliens in the United States in 1975 (see table).

Critique of the Lesko Report

The Base-Year Estimate

The Goldberg estimate of the base-year stock of illegal Mexican aliens is subject to a wide range of error because the method by which it was derived assumes an unrealistic level of accuracy in the Mexican data. Small percentage errors in the accuracy of the censuses, or in Mexican fertility and mortality data, translate into large absolute errors in the base-year estimate. For instance, the director of International Data Evaluation for the U.S. Bureau of the Census commented that a 1 percent differential in the coverage of the 1970 Mexican census relative to the 1960 census would result in a half a million person difference between the two censuses. Even if both censuses missed the same proportion of the population, population growth in Mexico would result in more persons who were not enumerated in 1970 than in 1960, seriously affecting migration estimates based upon these censuses.

The unreliability of the Goldberg estimate would be less important were it simply used to determine the initial stock of migrants, for this stock would quickly be swamped by subsequent inflows. However, the Goldberg estimate is also used as the basis for deriving the constant factor by which the minimum got-away ratio is expanded each year. This method of deriving the value of the got-away ratio takes errors in the base-year stock and compounds them in the estimates of yearly inflows. Thus, errors of several hundred thousand persons in the beginning estimate are quickly transformed into errors in the millions in the final stock. The extreme sensitivity of the Lesko results to their base-year estimate makes it imperative that this figure be reliable.

Yearly Inflows and the Use of Apprehension Data

The Lesko report approximates the annual inflow of illegal aliens by multiplying border apprehensions by a factor intended to represent the number of aliens who got away for each of these apprehensions. This got-away ratio could have been assumed constant, but Lesko Associates apparently realized that apprehensions, besides being dependent on the number of attempted entries, are also a function of the level and efficiency of INS resources. In an effort to capture these influences, they permit the got-away ratio to vary in proportion to the ratio of yearly apprehensions in the interior to yearly apprehensions at the border. However, this approach merely shifts from an assumed constant ratio between *border* apprehensions and inflow to an implicitly assumed constant ratio between *interior* apprehensions and inflow.[1]

This assumption is particularly inappropriate, for of all categories of apprehensions those in the interior exhibit the greatest variation with respect to migrant inflow. Apprehensions made away from the border area are often the result of raids on establishments that employ illegal aliens, and as such they are subject to continuous changes in INS policy. For instance, the *INS Reporter* noted that during the 1975 fiscal year "service officers concentrated their efforts toward locating illegal aliens in jobs that could be readily filled by U.S. citizens" (1976, p. 54). The *New York Times* stated that "cutbacks (in funds) caused alien roundups to dip by 70 percent" (16 March 1975). Even events outside the control of the INS will affect apprehensions. In 1973 the Supreme Court ruled that the INS "roving patrols," which had operated to check cars for illegal aliens outside of the border areas, were illegal, but the Court substantially modified this decision three years later. Such examples of shifts in the level and deployment of resources cast substantial doubt upon whether the relationship between successful entries and interior apprehensions has been stable.

Lesko Associates derived an estimate of 5,204,000 illegal Mexican aliens in the United States in 1975.

Estimates of Mexican Illegal Aliens in the United States, 1970 to 1975*

Year	Got-away-at-entry ratio	Successful illegal entrants (thousands)	Illegals remaining from previous years (thousands)	Mexican illegals in United States (thousands)
1970				1,597.0
1971	8.61	544.6	1,555.2	2,099.8
1972	7.64	648.9	2,044.7	2,693.6
1973	6.89	845.0	2,623.0	3,468.1
1974	5.67	972.3	3,377.2	4,349.5
1975	6.26	968.4	4,235.6	5,204.0

*Constant factor = 3.13

Source: Lesko Associates, "Final Report: Basic Data and Guidance Required to Implement a Major Illegal Alien Study During Fiscal Year 1976," prepared for Office of Planning and Evaluation, U.S. Immigration and Naturalization Service, Washington, D.C., October 1975, p. 12.

Moreover, the assumption of a constant relationship between any category of apprehensions and migrant inflows is inappropriate because of the long time period involved. The value of the constant was calculated from apprehension data of the 1960s and applied to apprehensions made from 1970 to 1975. Thus, over a fifteen-year period in which apprehensions increased by a factor of twenty, the relationship between these apprehensions and migrant inflow is assumed to remain constant.

Return Migration

Having derived the gross annual flow of undocumented aliens who successfully enter the United States, Lesko Associates subtracted the number who voluntarily return to Mexico each year to obtain the net annual flow of illegal Mexican aliens. As the barriers erected by the INS face in only one direction, there is little direct information available on return migration to Mexico. The Lesko report based its estimate of this flow on the number of legal European immigrants who subsequently emigrated to another country or returned to their own country—an analogy that is appropriate only if the process of illegal migration from Mexico is comparable to the process of permanent European migration to the United States. On the basis of this comparison, Lesko Associates assumed that only 2 percent of the Mexican illegal alien population returned to Mexico each year.

A large body of evidence suggests that the analogy to European migration is completely inappropriate—that the typical Mexican migrant will remain in the United States less than a year and will maintain strong ties to Mexico, returning there frequently. A study of migrants from the town of Cedral concluded, "Seasonal migration to the United States has become a fairly regular part of their work pattern."[2] An observer of the situation in a small village in Michoacán noted, "everyone, it seems, sooner or later comes home again."[3] An INS official put the average duration of stay of the Mexican illegal alien at about six months and commented on an interesting experiment concerning the return flow of migrants: "We used to check south-bound buses. We caught almost as many aliens in a year going south as we did going north! Finally we knocked it off. If we apprehended them traveling south, we would have to haul them the rest of the way south. The fact is that these people do go home."[4]

Perhaps the most conclusive evidence concerning the average duration of stay of illegal Mexican aliens comes from interviews by Wayne Cornelius in central Mexico. He found the average duration to be from six to eight months,

with 71 percent staying less than four months on their initial trip and 54 percent less than four months on their most recent trip.[5] This corresponds with the results of interviews with more than 800 apprehended illegal aliens conducted by North and Houstoun, who found that most Mexican aliens had made multiple visits and that the average duration was less than one year.[6]

Demographic Implications of the Lesko Estimates

Over 90 percent of apprehended Mexican illegal aliens are male and between the ages of 15 and 40. Survey studies by North and Houstoun and by Cornelius agree that undocumented flows consist largely of males who come from a small group of states in central Mexico. What emerges is the conclusion that six states–Guanajuato, Jalisco, Michoacán, San Luis Potosí, Zacatecas, and Chihuahua–contribute the great majority of undocumented Mexican workers.

Based on the 1970 Mexican census, the expected size of the 1975 cohort of males between the ages of 15 and 40 in these six states is 2,524,753. If we assume, conservatively, that only 50 percent of the Lesko estimate has come from these states, 40.5 percent (90 percent times 90 percent times 50 percent) would be young males from these states. Thus, the Lesko estimate would imply 2.1 million males (40.5 percent times 5.2 million) from central Mexico and Chihuahua are presently residing in the United States. This represents four out of every five men from one of the most populous regions in Mexico! As a shortage of manpower of this magnitude could not escape the attention of observers, it must be concluded that the biases in the individual elements of the Lesko estimate have compounded one another to result in a number that fails to pass the most basic of empirical tests.

Policy Considerations

The implications of our findings are dramatic. Instead of coming to the United States and never leaving, most Mexican aliens leave within the same year they come. Those who return to the United States the next year and are apprehended increase the estimated Lesko inflow and those who escape apprehension are again assumed to become permanent residents. There is no more fundamental misconception in the Lesko report than the notion that the migration of Mexican illegal aliens is a permanent rather than a predominantly seasonal process. This misconception exaggerates the size and rate of growth of the stock of undocumented Mexicans and leads to erroneous policy conclusions. If migration is temporary, what we see in apprehension data is not a set of permanent increases in the labor force equal to the total migrant inflow but rather a supply of labor that requires new jobs only to the extent of the increase in the size of the annual flow.

Moreover, legislation such as the Carter administration's Alien Adjustment Act, which would give immigrant status to persons who could prove residence since 1970 (though it might have been only seasonal), would not legitimize an existing situation. It would rather create a situation in which, through improper use of documents obtained during their residence, seasonal migrants could become permanent residents. Thus, by reflecting a false view of the migration process, the Carter bill could have the ironic effect of establishing a larger and more permanent illegal alien population than the United States presently contains.

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Notes

1. This can be easily proven mathematically. Lesko Associates postulate

$$E_t = G_t \cdot A_t,$$

where E_t represents yearly entries of illegal aliens into the interior of the United States, A_t yearly border apprehensions, and G_t the got-away ratio. But G_t is itself equal to a constant (X) times the ratio of interior apprehensions to border apprehensions (O_t/A_t). Therefore, substituting into the above equation gives

$$E_t = X(O_t/A_t)A_t = XO_t.$$

Thus entries into the interior are equal to interior apprehensions times a constant.

2. David Alvirez, "The Consequences of Migration to the United States on Men from Monterrey and Cedral, Mexico" (master's thesis, University of Texas, 1970), p. 48.

3. Richard Critchfield, "They Still Come Home to Huecorio," *Christian Science Monitor*, August 31, 1977, p. 17.

4. Paul E. Sultan and John M. Virgo, "The Legal and Illegal California Farmworker: Some Implications for Unemployment Insurance," report prepared for the Manpower Administration, U.S. Department of Labor, March 1973, p. 241.

5. Wayne A. Cornelius, "Illegal Migration to the United States: Recent Research Findings, Policy Implications and Research Priorities," report prepared for the Center for International Studies, Massachusetts Institute of Technology, Cambridge, May 1977, p. 7.

6. David S. North and Marion F. Houstoun, "The Characteristics and Role of Illegal Aliens in the U.S. Labor Market: An Exploratory Study," report prepared for the U.S. Department of Labor, Linton and Co., Washington, D.C., March 1976.

Alien Migration

Mexican Workers in the United States and European "Guest Workers"

Niles Hansen

In 1970 per capita income in the United States was approximately $4,300, whereas the corresponding figure for Mexico was $550. The magnitude of this difference has resulted in large-scale migration from the interior of Mexico to the border region and, increasingly, to cities in the Midwest and along the East Coast. The annual number of legal immigrants from Mexico rose from about 43,000 in the late 1960s to 70,000 in 1973, but this figure is dwarfed by illegal immigration. About 773,000 illegal Mexican aliens were detected in 1976, but perhaps three or four times as many illegal aliens went undetected.[1] Moreover, the devaluation of the peso and high unemployment levels in Mexico are resulting in a burgeoning influx of border jumpers. A number of scholars and highly placed officials maintain that this has created a national crisis—a theme also circulated widely in the press.

The Case for Curbing Illegal Mexican Immigration

The most frequently encountered argument against illegal Mexican immigration is its alleged tendency to depress wages. In this view, already disadvantaged American citizens are forced to work at the low wage levels acceptable to the aliens or become unemployed, go on public welfare, resort to criminal activity, or move to another region. Chicanos in the Southwest have been most harmed, but other racial and ethnic groups increasingly are affected as illegal aliens fan out to more distant cities.

Initially the aliens did not represent any great burden on tax-supported social services because they did not bring their families and they tended to return to Mexico during slack employment periods. But to the extent that they bring their families or marry U.S. citizens and settle in the United States, they could be a costly drain on community services.

Illegal migration also creates problems for the aliens. Organized smuggling of alien workers is dangerous, and the smugglers' fees are high. Living conditions frequently are deplorable, and aliens are sometimes exploited by employers who are cognizant of their vulnerability to detection.

Finally, it is argued that Mexico suffers in the process. Family life is disrupted, the younger, more ambitious members of society are lost, and hundreds of thousands of Mexican citizens are at the mercy of decisions made in a foreign land.

Critics of the status quo favor concerted efforts to return illegal aliens to Mexico and to erect effective barriers against future illegal migration. The hiring of illegal aliens by U.S. employers also would be made a criminal act. The critics are not anti-Mexican but rather feel that such measures would benefit both the United States and Mexico. Nor are their proposals entirely negative. They maintain that U.S. financial and technical aid—channeled through international organizations—should be made available to Mexico to implement regional development programs and

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to promote labor-intensive processing activities in rural areas. In addition, they favor expanding free trade with Mexico because the impact of increasing imports could be widely spread throughout the American economy.

A More Favorable View of the Status Quo

Because there is widespread recognition of at least some potential merit in the arguments just presented, it is difficult to find explicit advocacy for the status quo. However, eclectic evidence indicates that illegal migration from Mexico may not be as perverse as its opponents insist.

The unqualified contention that Mexican aliens cause unemployment among U.S. citizens suggests that there is only a fixed amount of work to be done. Mexican aliens may represent a genuine threat to some workers at the lower end of the wage scale, but despite considerable rhetoric the point has yet to be demonstrated. Indeed, the alien may create his own employment, or a job may be created for him because he has a special skill or because he is willing to do a job that no one else will do. The fact that Mexican aliens have little difficulty in finding jobs in the United States suggests that they do not displace U.S. citizens to any large degree. There is "no evidence that disadvantaged native Americans have ever held, at leas in recent decades, a significant proportion of the kinds of jobs for which illegals are usually hired, especially in the agricultural sector."[2] Moreover, "even in the urban sector, there is as yet no hard evidence to support the thesis of massive job displacement."[3]

If illegal Mexican migration to the United States were to cease, one result might be higher prices for goods and services now produced by alien workers; and higher labor costs could cause some employment opportunities to disappear altogether, if mechanization became economically feasible. The elimination of jobs now filled by aliens could also result in a loss of complementary jobs for U.S. citizens. The extent to which these difficulties would arise cannot be accurately assessed without detailed studies of specific industries, firms, and occupations, and few have been done.

If the main impact of illegal migration is to depress wages rather than cause outright unemployment, then wages along the U.S.-Mexico border should particularly reflect this phenomenon. Although numerous scholars have asserted the notion of depressed border-region wages, their findings have been largely based on casual observation and deductive inference. However, a recent study did statistically estimate the magnitude of the alleged wage and income differentials between the Texas border area and Houston. After controlling for variations in the cost of living between regions, researchers found that annual real incomes in the border area are $684 less than in Houston—a difference of approximately 8 percent. Thus, if migration from Mexico is having a negative impact on border-area wages, it is not as severe as many have contended. "In fact, this differential is of the order of magnitude that it could represent the implicit premium that individuals along the border are willing to pay for nonpecuniary advantages such as remaining close to their cultural heritage."[4]

The charge that illegal Mexican aliens freeload on community services has never been documented; indeed the opposite situation appears to prevail. The illegal aliens must pay state and local sales taxes, and most have income and social security taxes deducted from their earnings. There are other deductions as well for unemployment and disability insurance and private pension plans, even though few aliens will ever receive the corresponding benefits. Research studies generally agree that illegal Mexican aliens make very little use of social services in the United States. In San Diego, which accounts for over 40 percent of illegal alien apprehensions along the Mexican border, the social services consumed by illegal aliens cost about $2 million per year; in contrast, illegal Mexican aliens contribute nearly $50 million annually to the support of these services.[5]

The fear that illegal Mexican aliens will become a burden as they settle permanently in the United States so far has little justification simply because the vast majority do not want to live permanently in the United States and in fact return to Mexico in the same year in which they leave. Critics often greatly exaggerate the total number of illegal Mexican aliens residing in the United States by treating each batch of temporary workers as a permanent increment to the national population. Put another way, there is a great deal of multiple counting of illegal Mexican aliens. On the basis of a three-year study in Mexican communities from which illegal migrants originate, Cornelius concludes that "substantial numbers of Mexican illegals do manage to take up more-or-less permanent residence in the U.S., either by concealing themselves in heavily Mexican-Chicano neighborhoods or by eventually legalizing their status. But they are outnumbered—probably by a margin of at least 10 to 1—by illegals who prefer to maintain a pattern of seasonal or 'shuttle' migration."[6]

Eclectic evidence indicates that illegal migration from Mexico may not be as perverse as its opponents insist.

The contention that illegal Mexican aliens are themselves victims of the present system focuses on cases of exploitation in the United States but neglects to point out that the migrants are escaping longer hours of work, lower wages, and worse working conditions in Mexico. Moreover, the

migrants generally prefer to seek their own opportunities in the United States rather than work under contract to specific employers, as was the case under the *bracero* program. They feel they experience less exploitation if they are free to switch employers. Whatever the abuses perpetrated by smugglers and employers, on balance illegal migration represents a lottery with a strong probability of gain for the migrant.

However much the Mexican government may deplore the disparities that give rise to migration to the United States, it has in practice maintained an essentially laissez-faire position toward the present system. This is understandable because illegal aliens are a major source of foreign exchange to aid Mexico's balance of payments difficulties. Periodic remittances and savings brought back by returning migrants probably amount to over $3 billion per year, even though roughly two-thirds of the earnings of illegal aliens remain in the United States. Moreover, the shuttle migration of Mexican workers has accelerated the adoption of American values in Mexico. Whatever the consequences on a more general cultural level, this process has served to promote the diffusion of technological innovation in Mexico, particularly in rural areas that had been characterized by traditional, nonmechanized agricultural techniques. Imported technologies also have been accompanied by American models of consumption. This in turn has led to extensive smuggling of American durable goods, which are regarded as superior in quality to Mexican-made products. However, the changing tastes and increasing incomes associated with shuttle migration should create wider markets for better-quality goods produced in Mexico.

There is a great deal of multiple counting of illegal Mexican aliens.

While the present system of illegal migration has been widely condemned as being harmful to the United States, Mexico, and the migrants themselves, the firm empirical evidence available suggests this is not the case. The informal mechanism currently operating has many shortcomings, but even greater problems would confront all parties concerned if the United States were to seal the border against illegal migration.

Northern Europe's Imported Labor Force

Large-scale migration of foreign workers to northern[7] Europe began in the early 1960s. Having absorbed refugees from eastern Europe and their own redundant farm labor, the northern countries felt that further industrial expansion was limited by labor-force bottlenecks. Industry actively recruited "guest workers" from Italy and then went outside the Common Market to Spain, Portugal, Greece, and Yugoslavia; eventually even Asia Minor and North Africa came into the picture.

The foreign workers were valued as a low-cost, mobile, and highly elastic economic input. The workers themselves benefited from considerably higher wage rates than they could hope to earn at home as well as from social and welfare guarantees. (In West Germany, for example, unemployed aliens have the same right as local citizens to claim unemployment benefits.) The sending countries could export their unemployment, and earnings remitted to relatives or brought back home provided welcome foreign exchange. In addition, it was expected that workers would acquire valuable industrial skills that they could apply at home later.

By 1973 at least eight million foreign workers were legally employed in northern Europe.[8] However, in that year the oil crisis and the recession that ensued brought about an abrupt change in European attitudes and policies. Recruiting bans and other restrictions were placed on foreign workers; West Germany and other countries even offered special inducements to encourage foreign workers to go home. Suddenly a system that seemed to be mutually

Foreign Workers Legally Employed in Northern Europe, 1964 and 1973

Country	1964		1973	
	Thousands of workers	Percentage of labor force	Thousands of workers	Percentage of labor force
Austria	40	1.2	248	8.2
Belgium	560	6.0	265	6.9
Denmark	12	0.5	49	2.0
France	1,200	6.2	1,930	9.2
Luxembourg	25	18.1	43	27.9
Netherlands	61	1.3	160	3.5
Norway	15	1.0	21	1.3
Sweden	162	4.2	222	5.7
Switzerland	782	31.3	621	20.0
United Kingdom	1,500	6.0	1,782	7.0
West Germany	912	4.0	2,595	9.9
Totals	5,269	5.5	7,936	8.4

Note: Frontier workers and seasonal workers with restricted work permits (usually up to six months) are not included in these figures.
Source: George Hoffman, *A Geography of Europe*, 4th ed. (New York: Ronald Press, 1977), p. 90.

advantageous to all concerned became the object of numerous criticisms.

In the 1960s it was assumed that foreign workers would come without families, stay a few years, and then return home to be replaced by other foreign workers. Furthermore, the common belief was that "they would put no strain on social or health services. No school problem would arise, nor would there be much liability for unemployment compensation. The foreign workers would pay taxes and make social-security contributions, without much chance of claiming commensurate benefits."[9] The scenario did not work out this way. The arrival of families put unexpected pressure on housing, schools, and hospitals. The once-welcome foreign workers increasingly became regarded as a source of unforeseen industrial costs, a heavy drain on public services, and a seemingly permanent underclass. The advantages of low-cost labor also came into question; businessmen wondered whether accepting less productive workers had not led them to neglect vital capital investments.

It also seemed less clear that the labor-exporting countries were benefiting to the degree expected. In particular, the technology transfer argument looked less than convincing. The industrial countries were attracting the exporting countries' more-skilled workers in the first place; a third to a half of the guest workers had some sort of skill before they left home. If the foreign workers returned to their home countries they did little to promote agricultural modernization because they no longer wanted to go back to the villages. Nor did foreign workers aim at acquiring industrial skills for use at home; if they intended to return home their objective typically was to accumulate enough savings to buy a house and a small business (such as a shop or taxi service). Moreover, those few foreign workers who managed to advance to skilled or supervisory positions abroad showed an increasing tendency to stay on in the host countries. Transferred earnings often seemed to be the only benefit gained by the labor-exporting countries, but even these diminished as foreign workers were joined abroad by their families. Thus, by the mid-1970s, Greece, Yugoslavia, and some of the North African countries were considering measures to discourage emigration.

Recently the international migration system has become even more complex; traditionally labor-exporting countries such as Italy, Portugal, Spain, and Greece have now become labor-importing countries. The departure of Portuguese workers for France has left vacancies to be filled by Cape Verdians; North African workers are found in increasing numbers in Italy and Spain; and an estimated 35,000 black and Arab workers are employed in Greece. Relatively high unemployment and the return of workers from northern Europe have led to efforts to expel workers belonging to this latest migration wave. What appears to be evolving is a geographically expanding labor market hierarchy, the dynamics of which are largely determined by market conditions at the top—in northern Europe. However, while the supply of foreign workers is highly elastic during boom times, it is difficult to reduce their number during recessions. Despite restrictive measures, the foreign migrant population in northern Europe remained steady at about twelve million between 1973 and 1975.

International Migration and Dual Labor Markets

Although labor markets have varying degrees of complexity, it is conceptually useful to distinguish two general types of markets. In brief, dual labor market theory holds that "a worker's earnings and productivity result from the jobs or job ladders to which an individual is permitted access, and are not personal characteristics that the worker can choose to embody in him or herself."[10] Workers in the primary labor market make their decisions about where to work according to the progression of jobs they can expect to hold during their employment. If they pass screening, they enter the firm's "internal labor market," which is characterized by specific training, relatively high wages, employment stability, and opportunity for advancement. The secondary labor market has the opposite characteristics; in this market "absenteeism and tardiness are commonplace and accepted as the norm; turnover on most jobs is high. Antisocial behavior, such as thievery, is also tolerated for employers simply find it easier to adjust to this behavior, perhaps by paying lower wages, than to try to change it."[11] Moreover, even if workers were once potentially capable of meeting the demands of the primary labor market, they tend to become habituated to traits that permanently exclude them from later employment opportunities in this market.

It is frequently noted that alien migrant workers are employed in the secondary labor market and that they accept employment in jobs that have been rejected by the native labor force. This is only a partial truth in that it fails to recognize an important attribute that makes foreign workers especially attractive to employers: they are indeed treated as members of the secondary labor market, but their behavioral characteristics tend to be those of the primary labor market. Even opponents of the present international labor migration system implicitly concede this point by arguing that the labor-exporting countries lose their most able and highly motivated workers. What keeps the foreign workers in the secondary market is not their lack of motivation or unwillingness to learn but rather larger considerations involving language, culture, and racism.

Implications for Mexico and the United States

Because so many Mexican alien workers are in the United States illegally and because they tend to return to Mexico on a regular basis, their presence in this country has produced relatively little social confrontation. The informal illegal migration system continues to function normally because it benefits all parties concerned, at least so long as each party looks only at its own situation and considers what would happen if illegal migration were strictly curtailed. Mexico gains foreign exchange and some technical skills and exports some of its unemployment. The

United States gains cheap labor willing to do menial tasks that citizen workers will not do. And the migrants gain higher wages and, frequently, better working conditions.

If the present situation is not as maleficent as some critics have maintained, this does not necessarily imply that it will or should continue. However, the fact remains that illegal migration cannot simply be legislated away. Case studies in Mexico indicate that "Mexican illegals are not likely to be deterred, even by the most draconian restrictive measures. The essence of the problem, and the futility of dealing with it merely through police actions, was conveyed most succinctly and eloquently by one of my subjects, who had been apprehended by the [Immigration and Naturalization Service] for the third time. Confronted by an INS agent, he was asked: 'What can we do to prevent you from doing this again?' The illegal responded: 'Shoot me!' "[12] In this light, European experience suggests some long-run issues that need to be carefully considered in the North American context.

Illegal migration from Mexico cannot simply be legislated away.

Europeans failed to anticipate the permanent settlement of aliens they had regarded as "guest workers." Although it is not clear that foreign workers and their families represent a net economic burden on the rest of society—an assertion heard less frequently now that the recession of the mid-1970s has passed—there is little enthusiasm for the old, essentially laissez-faire system; immigration restrictions are likely to remain in force for the foreseeable future. The permanent settlement of alien workers was indirectly fostered by the fact that they were legally and actively recruited and were given the same nonwage benefits as citizen workers. But equality in the workplace is not sufficient if social problems are to be avoided. Positive policies also need to be implemented in such areas as housing, language instruction, and the education of foreign children. This effort is being belatedly made.

It is possible that many Mexican "shuttle migrants" may decide to remain permanently in the United States and eventually bring family members. However, in the absence of the institutional inducements that prevailed in Europe, the pace of permanent settlement in the United States is likely to be relatively slow.

Meanwhile, more attention might be given to international aid for regional and industrial development in Mexico, as proposed by some critics of the present illegal migration system. In Europe some economists have proposed that businessmen could minimize local social problems by taking jobs to the workers via investments in labor-supplying countries. Despite the interest of European companies, complex investment decisions are based on many factors other than cheap, unskilled labor—and labor-supplying countries do not always rank high in these respects. While the Mexican government has attempted to attract U.S. investments on the basis of cheap labor, the results have been mixed. Nevertheless, Mexico's prospects for development appear to be brighter than in the recent past, partly because of a surge in oil exports. Mexico may find, as have some southern European countries, that as development proceeds it will be in the national self-interest to curtail labor migration abroad.

All things considered, there are no simple or cheap solutions to the problems occasioned by international labor migration, and the policies that may be relevant for one time period may not be for another. For the present, however, the evidence indicates that drastic measures to curtail illegal Mexican immigration would be unwarranted; indeed they might create more problems than they would solve. We should rather be engaged in an active learning process (tempered by a little patience) in which the interests of the United States and Mexico are coordinated and in which there will still be much to learn from European experience. The opportunity exists for a nation of immigrants to avoid some of the problems that have arisen in Europe.

Notes

1. It is not possible to estimate the number of illegal Mexican aliens in the United States with any precision from existing data sources. A widely publicized estimate of 5.2 million in 1975 is regarded by most experts as too high and based on faulty assumptions and methods. Wayne A. Cornelius, "Illegal Mexican Migration to the United States: Recent Research Findings, Policy Implications and Research Priorities," report prepared for the Center for International Studies, Massachusetts Institute of Technology, Cambridge, May 1977.
2. Ibid., pp. 8-9.
3. Ibid., p. 9.
4. Barton Smith and Robert Newman, "Depressed Wages Along the U.S.-Mexico Border: An Empirical Analysis," *Economic Inquiry*, vol. 15, no. 1 (January 1977): 63.
5. M.V. Villalpando et al., *A Study of the Socioeconomic Impact of Illegal Aliens on the County of San Diego* (San Diego: County of San Diego Human Resources Agency, 1977).
6. Cornelius, p. 8.
7. The adjective *northern* is used loosely here and includes such countries as France and Austria. The international labor migration discussed in this section essentially refers to movements from the Mediterranean area to more northerly countries.
8. European authorities customarily assume that illegal aliens represent about 10 percent of the legal alien-worker population. In France and Germany the proportion of illegal aliens is probably larger. *The Economist*, August 9, 1975, p. 24. It has been estimated that some five million family members have accompanied alien workers to northern Europe. *Business Week*, March 31, 1973, p. 95.
9. Robert Ball, "How Europe Created Its 'Minority Problem'," *Fortune*, December 1973, p. 132.
10. F. Ray Marshall, Allan M. Cartter and Allan G. King, *Labor Economics*, 3rd ed. (Homewood, Ill.: Richard D. Irwin, 1976), p. 276.
11. Ibid., pp. 276-77.
12. Cornelius, pp. 18-19.

Major Trends in Population Growth in Texas

John A. Burghardt

Statewide evidence of Texas population growth during the past fifteen years reflects two national trends—the Sunbelt phenomenon and population decentralization.

Both the southern and the state population growth rates, which were above the national average during the 1960s, grew slightly in the 1970s. In contrast, the national average growth rate declined. Thus in the 1970s Texas and the South have suddenly become focal points of national population growth. The principle source of growth has shifted from natural increase to in-migration.

A new national trend toward population decentralization is also apparent in the population data for Texas. Nationally, metropolitan area growth rates have declined, and small metropolitan areas are now growing faster than large ones. On the other hand, nonmetropolitan areas have had dramatic increases in their growth rates. In Texas, the growth of large metropolitan areas has slowed, while the growth of small metropolitan areas has accelerated. But the larger ones still grow faster. This diverges from the national tendency for small metropolitan areas to grow faster than large ones. Yet nonmetropolitan area growth rates in Texas reflect national trends almost exactly.

The Sunbelt Phenomenon

The center of population growth has shifted from the northeastern and north central regions of the United States toward the western and southern regions. The Sunbelt phenomenon, as this shift has come to be known, has attracted public attention because it seems to have occurred so suddenly and dramatically. It also raises difficult public policy issues. As the geographic distribution of population shifts, the regional balance of political and economic power in the nation is bound to shift also.[1]

Does the Sunbelt phenomenon represent a reversal of past trends in population change for the South? How has it affected Texas?

From 1960 to 1970 the nation grew at a 1.3 percent annual rate, while the South grew at a 1.4 percent rate and Texas grew at a 1.6 percent rate. From 1970 to 1975 nationwide growth slowed to less than 1 percent, while growth rates in the South and Texas increased to 1.6 percent and 1.8 percent, respectively. Clearly then the recent high average growth rates in Texas and the South represent not a reversal but an acceleration of past trends. Furthermore, Texas has grown more rapidly than the South as a whole during both periods.

From 1970 to 1975 Texas grew twice as fast as the nation.

What is new in the 1970s that causes the nation to take note of the Sunbelt phenomenon?

For one thing, a substantial regional increase in growth rates against a backdrop of declining national growth rates is itself significant. Whereas previously Texas grew 23 percent faster than the country, it grew twice as fast as the nation during the first half of this decade.

More significantly, the principle source of regional population growth has shifted from net natural increase (the difference between births and deaths) to net in-migration. Although net migration out of the South ended in the 1950s, and the region received modest net inflows of people from 1955 to 1970, in-migration increased dramatically from 1970 to 1975. During the 1960s, the population in the South grew at 1.4 percent per year, of which 1.2 percent was from natural increase and 0.2 percent from in-migration. From 1970 to 1975, when the South grew at 1.6 percent per year, 0.8 percent was from in-migration and 0.8 percent from natural increase. In absolute terms, in-migration was 2.6 million from 1970 to 1975 and only 0.7 million from 1960 to 1970.

In Texas, natural increase accounted for an annual population increase of 1.4 percent in the 1960s while the increase due to in-migration was 0.2 percent. From 1970 to 1975 the rate of natural increase declined to 1.1 percent; growth from net migration rose to 0.7 percent per year. In absolute terms, net in-migration to Texas increased from

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146,000 during the ten-year period 1960-1970 to 410,000 during the five-year period 1970-1975.

Population Decentralization

Population analysts have recently drawn attention to a second change in population growth patterns, which is receiving less public attention than the Sunbelt phenomenon. For most of this century national population has been relocating gradually from rural to urban areas. However, evidence indicates that since 1970 this rural exodus has slowed or stopped in many areas and even reversed in some. The trend has been dubbed the "rural renaissance." Metropolitan areas have also experienced a reversal of patterns that prevailed in the 1960s. Whereas large metropolitan areas were previously growing faster than small ones, the opposite has been true in the 1970s. Both changes indicate a broad trend toward population decentralization.

If this represents the beginning of a long-term trend away from very large urban areas, as some analysts contend, rather than merely a temporary response to the deep recession in the early 1970s, as others maintain, it may portend changes in our national life that are more profound than the Sunbelt phenomenon. The reasons for this population decentralization are not yet well understood; indeed it has scarcely been noticed. Rather than speculate on the causes for the shift, I will document its existence at the national level and in Texas.

At the national level the evidence is striking (see table1). The population growth rate for metropolitan areas dropped from 1.6 to 0.8 percent, while it increased in nonmetropolitan areas from 0.4 to 1.2 percent. The reversal of ranking in growth rates for the various size classes of metropolitan areas is particularly striking. In the 1960s the largest standard metropolitan statistical areas (SMSAs) had the most rapid growth, and growth rates declined as the size class declined. Precisely the reverse ordering occurred between 1970 and 1975: growth rates increased as size class declined. Furthermore, the class of metropolitan areas with populations over one million actually had a net out-migration.

Among nonmetropolitan areas there has been an increase in population growth rates in all classes. Net migration changes turn from negative to positive in all categories (except counties most closely linked to SMSAs, which were positive in the 1960s). To a certain extent growth in counties close to metropolitan areas may be disguised metropolitan growth. That is, as improved transportation facilities increase commuting range, and as jobs relocate to metropolitan fringe areas, functional metropolitan areas may spill beyond the somewhat arbitrarily drawn boundaries of standard metropolitan statistical areas. However, this does not account for the turnaround in growth rates of entirely rural counties, which are not directly linked to national metropolitan life. Yet such areas, which lost population in the 1960s, actually had high growth rates during the 1970s.

The influence of the Sunbelt phenomenon and the trend toward population decentralization intermingle as we compare metropolitan and nonmetropolitan growth in Texas and the South (see table 2).

For the South, metropolitan growth slowed only slightly from the 1960s to the 1970s, as the Sunbelt phenomenon nearly offset the national tendency for metropolitan growth rates to fall. For Texas, the Sunbelt phenomenon completely neutralized the tendency for metropolitan area growth rates to decline.

However, examination of growth rates for Texas metropolitan areas by size class clearly reveals the decentralization tendency at work along with the Sunbelt phenomenon. While Texas SMSAs in each size class continue to grow at well above national rates for comparable size classes, decentralization is also occurring (see table 3). Growth rates of the largest metropolitan areas (Houston and Dallas-Fort

Table 1

Growth Rates in the United States

Population category	Annual growth rate (percentage) 1960-1970	1970-1975
Metropolitan areas*		
Over 1.0 million	1.6	0.5
0.5 to 1.0 million	1.5	1.0
0.25 to 0.5 million	1.4	1.3
Less than 0.25 million	1.4	1.5
Nonmetropolitan areas		
Counties adjacent to SMSAs (percentage commuters)		
20 or more	0.9	1.8
10 to 19	0.7	1.3
3 to 9	0.5	1.2
Less than 3	0.2	1.1
Counties not adjacent to SMSAs (rural)	−0.4	1.3

*Population inside standard metropolitan statistical areas (SMSAs), standard consolidated statistical areas (SCSAs), or New England county metropolitan areas (NECMAs).

Source: Developed from data in Peter A. Morrison, "Current Demographic Change in Regions of the United States," paper presented at a conference on "Alternatives to Confrontation: A National Policy Toward Regional Change," September 24-27, 1977, at the University of Texas at Austin.

Table 2

Growth Rates for Metropolitan and Nonmetropolitan Areas in the United States, the South, and Texas

Region	Annual growth rate (percentage) Metropolitan areas 1960-1970	Metropolitan areas 1970-1975	Nonmetropolitan areas 1960-1970	Nonmetropolitan areas 1970-1975
United States	1.6	0.8	0.4	1.2
South	2.0	1.8	0.3	1.3
Texas	2.1	2.1	−0.2	0.8

Note: For Texas the category *metropolitan area* includes all counties that belonged to standard metropolitan statistical areas as of January 1978.

Source: Developed from U.S. Department of Commerce, Bureau of the Census: *Current Population Reports*, series P-25, no. 709; *Current Population Reports*, series P-25, no. 717; and *1970 Census of Population*, vol. 1.

Worth) dropped from 3.3 percent to 2.2 percent. The decline in growth rate was much sharper for Dallas-Fort Worth (3.2 percent to 1.5 percent) than for Houston (3.4 percent to 3.0 percent). Growth rates in the metropolitan areas with populations below 500,000 increased substantially. For the eighteen metropolitan areas with less than 250,000, however, the average growth rate remained below the growth rate for the larger metropolitan areas.

The Sunbelt phenomenon counters the tendency toward decentralization. The larger metropolitan areas in Texas receive many of the Sunbelt in-migrants. And Houston continues to grow at exceptionally high rates. The sharp national reversal, which occurs when size classes are ranked by growth rate, is not present. But the tendency toward decentralization is evident in the *direction of change* in growth rates for metropolitan areas of various size classes. Growth rates in smaller Texas metropolitan areas increased while growth rates in the largest ones declined.

The reversal of rural decline is also apparent in Texas and the South. The trends in the South and in the United States are nearly identical. In Texas, where most nonmetropolitan counties are truly rural, the reversal is also evident.

Data are not available to examine classifications for Texas nonmetropolitan areas that are comparable to the national classifications in table 1. However, one can approximate these by making the grosser distinction between nonmetropolitan counties that are contiguous to metropolitan areas and those that are not contiguous to metropolitan areas. Not surprisingly, both groups adhere very closely to the nationwide trend for entirely rural areas. There is a hint of a stronger reversal for contiguous nonmetropolitan counties, which had a 0.2 percent rate of loss in the 1960s and a 0.8 percent rate of gain in the 1970s. Noncontiguous nonmetropolitan counties had a 0.1 percent rate of loss and a 0.7 percent rate of gain for the same periods.

Regional Growth Rates in Texas

The foregoing analysis has demonstrated that recent statewide trends in population growth reflect major national trends. However, the differences within Texas can be examined after the state has been divided into six regions with broadly similar growth patterns.[2] In West Texas, which is more rural than the state as a whole, there is clear evidence of a reversal of rural decline. North central Texas' growth rate has declined from a very high 3.0 percent to a moderate 1.3 percent. In East Texas a slow growth rate in the 1960s has accelerated in the present decade. The region along the Gulf Coast has grown at about the same rate in the 1970s as in the 1960s, although within the region the pattern varies quite a bit. In Central Texas the growth rate has accelerated from a moderate 1.6 percent to a high 2.4 percent. Finally, the border region of the state has had the greatest change in growth, accelerating from a 0.5 percent rate to a very high 3.0 percent rate.

Table 3

Growth Rates for Texas Metropolitan Areas

Population category	Number of SMSAs	Annual growth rate (percentage) 1960-1970	1970-1975
Over 1 million	2	3.3	2.2
0.5 to 1 million	1	1.9	2.0
0.25 to 0.5 million	4	1.4	2.2
Less than 0.25 million	18	0.6	1.9

Note: The category *metropolitan area* includes all counties that belonged to standard metropolitan statistical areas as of January 1978.

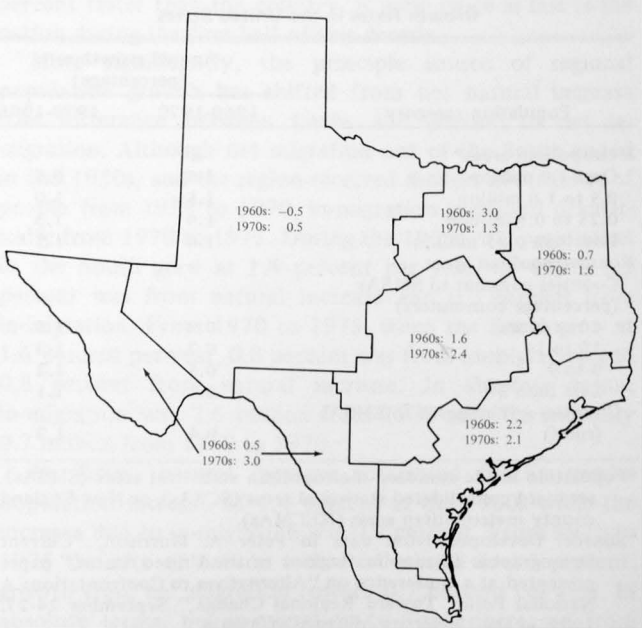
Source: Developed from U.S. Department of Commerce, Bureau of the Census: *Current Population Reports*, series P-25, no. 717; and *1970 Census of Population*, vol. 1.

Notes

1. For an excellent discussion of recent demographic changes and the public policy issues they raise, see Peter A. Morrison, "Current Demographic Change in Regions of the United States," paper presented at a conference on "Alternatives to Confrontation: A National Policy Toward Regional Change," sponsored by the Lyndon Baines Johnson Presidential Library and the Lyndon B. Johnson School of Public Affairs, September 24-27, 1977, at the University of Texas at Austin. The present paper relies heavily on Mr. Morrison's presentation of national and broad regional trends. I have also benefited from conversations with Charles P. Zlatkovich and Vincent J. Geraci and give thanks to Mercedes Torres for assistance with data entry and to Lynne Norton for guidance in using the computation software.

2. My original analysis used the twenty-five state planning regions as the areal units. The six regions in the map combine state planning regions that have broadly similar growth patterns. Naturally the six-region breakdown obscures important local differences. A more detailed breakdown of Texas growth patterns will be available in a forthcoming research report from the Bureau of Business Research.

Annual Growth Rates of Broad Regions of Texas



San Angelo

Making the Transition from Agriculture to Manufacturing

Joanne P. Austin and Charles P. Zlatkovich

Long considered to have an economy dependent upon an agricultural base—particularly income generated by wool and mohair production—the San Angelo metropolitan area has expanded its economic possibilities by developing into an important manufacturing center for West Texas. The growth of existing industries and the introduction of new manufacturers have helped San Angelo project a prosperous image that should continue well into the future. With the manufacture of products ranging from apparel to dairy goods to surgical sutures and the growth of the communications industry, San Angelo has become a profitable manufacturing municipality rather than a limited agricultural community.

Population Growth

Although the growth of the San Angelo SMSA (Tom Green County only) is not as rapid as that of the state as a whole, Bureau of the Census estimates show that the population of San Angelo increased 8.6 percent over the period 1970 to 1976. Statewide population, on the other hand, rose 11.5 percent over the same period. Unlike the neighboring SMSA of Abilene, San Angelo can attribute only 48.7 percent of the change to natural increase (the excess of births over deaths). More than half of the people became citizens of San Angelo as a result of in-migration. Increased industrial and economic opportunities, as well as a large state educational facility, are bringing more and more people to the area.

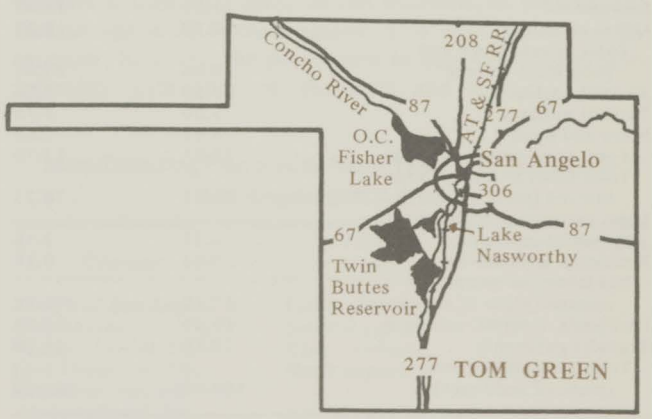
Employment and Personal Income

As of 1975, nearly all of the major economic sectors contributed to the San Angelo area economy. Highest concentrations were in the fields of manufacturing, trade, services, and property income; other significant contributors were the military, communications, and transfer payments. Agriculture is more important to the health of the San Angelo economy than to the state economy as a whole, yet its dominance in the area has decreased with the rise of manufacturing.

A study done by the West Texas Utilities Company in 1976 reveals that although the San Angelo SMSA covers only Tom Green County, fifteen other counties surrounding San Angelo provide labor for the area. These counties are bound together by their shared use of educational facilities and dependence upon San Angelo for trade, services, and media. The commuting area is smaller, comprised of Tom Green, Coke, Concho, Irion, Schleicher, Sterling, and half of Runnels counties. The other half of Runnels County is included in the commuting area for the Abilene SMSA.

The unemployment rate for the San Angelo SMSA is quite low. According to figures compiled by the Texas

San Angelo SMSA
(Tom Green County)



Source: Texas State Department of Highways and Public Transportation, 1977.

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Employment Commission, the average rate of unemployment for the period between January and September of 1977 was only 3.0 percent, whereas the figure for Texas as a whole was 5.2 percent; variance in the rate of unemployment for San Angelo over that period was small. With unemployment so consistently low, indications are that the San Angelo SMSA can quickly meet the employment needs of its growing population.

Agriculture in Tom Green County still provides 3.46 percent of personal income for San Angelo against 2.63 percent for the state. Unlike most of the rest of Texas, San Angelo's major livestock is not cattle but sheep, the third most important livestock being Angora goats. According to 1976 state agricultural statistics, ranchers in Tom Green County owned a total of 115,000 sheep, 57,000 cattle, and 18,000 goats. Wool and mohair production, then, as well as products from lamb, have been significant to the San Angelo area, although rising beef prices have made cattle more desirable in recent years. Cash crops include sorghum, wheat, oats, upland cotton, and hay; most crops are grown without use of extensive irrigation.

The communications and transportation industry in San Angelo provides 6.89 percent of personal income for the area, whereas its contribution to the state is 5.84 percent. Most of the area income comes from the operations of three General Telephone and Electronics subsidiaries in the San Angelo SMSA, headquarters for Texas, New Mexico, Arkansas, and Oklahoma. As of early 1977, GTE provided employment for approximately 1,500 people with an annual payroll exceeding $16 million.

Percentage of Personal Income by Major Sources
San Angelo SMSA and Texas, 1975

Source	San Angelo SMSA	Texas
Agriculture	3.46	2.63
Mining	2.77	3.52
Construction	3.29	5.56
Manufacturing	11.96	15.14
Transportation, communication, and public utilities	6.89	5.84
Wholesale and retail trade	12.58	14.54
Finance, insurance, and real estate	2.66	4.04
Services	11.21	11.45
Other industries	0.18	0.27
Total private labor and proprietor income	55.00	63.00
Federal civilian	2.69	3.28
Federal military	5.00	2.79
State and local	8.11	7.66
Total government earnings	15.81	13.73
Total labor and proprietor income (place of work)	70.81	76.73
Less: personal contributions for social insurance	3.27	3.78
Residence adjustment	−0.03	0.15
Net labor and proprietor income (place of residence)	67.50	73.11
Dividends, interest, and rent	19.34	15.64
Transfer payments	13.16	11.26
Total personal income (place of residence)	100.00	100.00

Source: Developed from data compiled by the Regional Economics Information System, Bureau of Economic Analysis, U.S. Department of Commerce.

Manufacturing is fast becoming one of the largest contributors to personal income in the San Angelo SMSA. Although lower than the state's percentage of 15.14, the 11.96 percent contribution is the second highest of the total private labor and proprietor income in the area. Five firms have over 250 employees, and a number of smaller firms have 100-150 employees. A wide variety of products has enabled San Angelo to free itself from the vagaries of one industry or market; manufactures include surgical sutures, aircraft components, apparel, dairy products, meats, and ceramic tile. Other small local industries are in fields related to the production of sheep and wool goods.

The government's share of personal income has been provided by military earnings and state and local earnings. Goodfellow Air Force Base, a security service training facility, has been the major source of federal military income; total federal contribution to area personal income amounts to 7.69 percent. The Department of Defense has recently announced plans to phase out the base and its operations in San Angelo, however.

Personal income in the San Angelo SMSA receives 8.11 percent from state and local sources, a larger percentage than both federal categories combined and larger than that received for the state as a whole (7.66 percent). Components of this sector include a Texas Highway Department office and local public officials, but the largest factor is Angelo State University. Employing nearly 500 faculty and staff, the university is expanding with the additional hiring of 38 employees, 19 of whom are faculty, for the 1977-1978 academic year. For the past academic year there were thirty-seven undergraduate and twenty graduate programs and plans to add seven new degree programs by the fall of 1978. Enrollment was 4,942 in the fall of 1976 with projections over 5,000 for the coming semesters.

As a result of a growing population and the presence of an expanding university, the wholesale and retail trade sector makes the highest contribution to San Angelo's personal income: 12.58 percent. The Hemphill-Wells retail department store has two locations in San Angelo, one of

Nonagricultural Civilian Payroll Percentages
San Angelo SMSA, Texas, and United States, 1977

Category	San Angelo SMSA	Texas	United States
Mining	2.4	3.1	1.0
Contract construction	6.1	6.8	4.6
Manufacturing	18.9	18.3	23.8
Transportation, communication, and public utilities	9.0	6.2	5.6
Trade	22.8	24.5	22.3
Finance, insurance, and real estate	3.9	5.5	5.5
Services	18.4	17.7	18.6
Government	18.5	17.8	18.5

Note: Period covered is January to September, 1977.
Sources: Data for San Angelo SMSA obtained from *Manpower Trends*, later *Texas Labor Market Review* (Texas Employment Commission) February-October, 1977; Texas and U.S. data obtained from *Employment and Earnings* (U.S. Department of Labor, Bureau of Labor Statistics) April-December, 1977.

which is a new outlet employing approximately 200 people; the firm has been in the San Angelo area since 1924. Goodyear Tire and Rubber, along with five other firms, operates a tire-testing facility employing about 250 people. In addition, Broadhead Associates plan to open a $21 million shopping mall, at the intersection of Loop 306 and U.S. Highway 67, that will cover 600,000 square feet. With a continuing need for restaurants, entertainment, and retailers, the outlook for trade in the San Angelo metropolitan area looks quite favorable.

The services sector contributes 11.21 percent to local personal income, a figure close to the 11.45 percent contribution in the state. Most of the area contribution is made up by health and educational facilities and is supplemented by local community service organizations and tourism at the restored Fort Concho Museum.

The San Angelo facility of Ethicon, Inc., the world's largest suture manufacturing plant, employs over 1,000 people and covers 200,000 square feet--all underground.

With increased oil activity in the near West Texas counties, the contribution of the mining sector is 2.77 percent; statewide contribution is 3.52 percent. Although construction provides only 3.29 percent of personal income against 5.56 percent in Texas as a whole, the San Angelo SMSA ranked among the top five Texas metropolitan areas for percentage change in dollar volume in permit valuation for nonresidential construction for 1976-1977. Increases in the level of in-migration should help spur residential construction as well.

The final large contributors to personal income in the San Angelo area are property income and transfer payments, at 19.34 and 13.16 percent respectively. Both percentages are higher than their state equivalents in each category. The presence of sizable transfer payments may be attributed to an increasingly older population and a large percentage of households in the lowest income bracket. Property income is earned by the older population as well, as a number of retirees live in the San Angelo area. Income for this group is supplemented by the fairly large percentage of citizens making at least a middle-income salary and receiving property income as well.

Chief Manufacturing Industries

Although only five manufacturers in the San Angelo SMSA employ over 250 people, they all have sizable operations. The largest single industry is the manufacture of surgical sutures and needles. The San Angelo facility of Ethicon, Inc., is the world's largest suture manufacturing plant, employing over 1,000 individuals and covering 200,000 square feet—all underground.

The apparel industry is the second largest employer in the San Angelo SMSA. Concurrent with the closing of their facility in Abilene, Aileen, Inc., also terminated production at the San Angelo plant in late 1976. The two top remaining firms, Barry's of San Angelo and Levi Strauss, are quite strong, however, and provide employment for approximately 900 people.

Since the production of sheep, cattle, and goats and their related goods is such a dominant feature of the San Angelo economy, the food processing industry assumes an important position as a key manufacturing employer. The large operations of Gandy Dairies, Inc., employ over 250 individuals and supply dairy products to all of the near West Texas area. In addition, meat processing and related industries provide employment for approximately 150 people and a ready market for the area's ranchers.

Other important industries in the San Angelo SMSA are the production of aircraft parts by Mitsubishi Aircraft International, Inc., and the San Angelo Standard-Times. Mitsubishi employs more than 250 people and can be considered the fourth largest industrial force in San Angelo. The daily newspaper not only provides employment for the San Angelo SMSA but serves as a source of information for twenty-three surrounding counties with either morning or evening circulation. Additional manufactures of importance to the San Angelo metropolitan area are oil field equipment, ceramic tile, and telephone parts and equipment.

Population and Income Profile

Population trends in the San Angelo metropolitan area indicate a continual aging of the residents; at present, the median age is 28.8 years against 27.8 years statewide. By category, however, the population in San Angelo compares favorably with that of the state and shows a greater

Manufacturing Plants with More Than 250 Employees San Angelo SMSA, 1977

Company	Primary products	Establishment date
Barry's of San Angelo	Ladies shoes	1947
Ethicon, Inc.	Surgical sutures	1964
Gandy's Dairies, Inc.	Dairy products	1934
Levi Strauss and Co.	Men's apparel	1965
Mitsubishi Aircraft International, Inc.	Aircraft components	1965

Source: *1977-1978 Directory of Texas Manufacturers* (Austin: Bureau of Business Research, 1978).

percentage of people in the 18-24 age bracket (15.4 percent as opposed to 13.7 percent). There are fewer very young people of the ages of 0-17 years (29.1 percent) than in the state (32.0 percent); unlike other Texas metropolitan areas with agricultural dependence, disparity between the young and old is not so great, and there exists a larger number of young and middle-aged adults. This can be attributed to the increasing opportunities in manufacturing and communications and the presence of a growing university.

These rising employment opportunities are reflected in the effective buying power of the households in San Angelo as well. The percentage of households earning no more than $7,999 is greater at 32.9 percent than the statewide figure of 30.2 percent, yet the categories of income from $8,000-$24,999 indicate a more equitable distribution of income in these classes and greater buying power. In addition, the percentage of San Angelo's residents making over $25,000 per year is only behind the state's figure by approximately two and a half percentage points. Per capita and median household incomes are lower over all: the median for the San Angelo SMSA is $11,924 versus $13,117 for the state. As in other metropolitan areas having a military facility, earnings are lower, reflecting smaller wages compensated for by other benefits.

Metropolitan Area Characteristics

One may define the San Angelo SMSA as an area having the following characteristics:

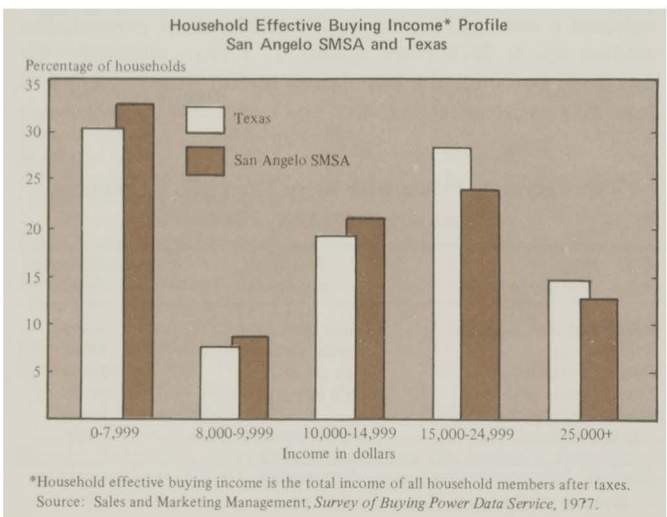
- A slightly slower growth rate than in the state.
- An economy historically based upon agriculture but increasingly dependent on manufacturing and communication.
- Sizable personal income in state and local earnings, principally a result of the growth of Angelo State University.
- Industrial activity centered in surgical sutures, apparel, and food processing.
- A slightly older but well-balanced population.
- Lower per capita and household income levels yet a greater number of households in the middle ranges of buying power.

Significant Factors

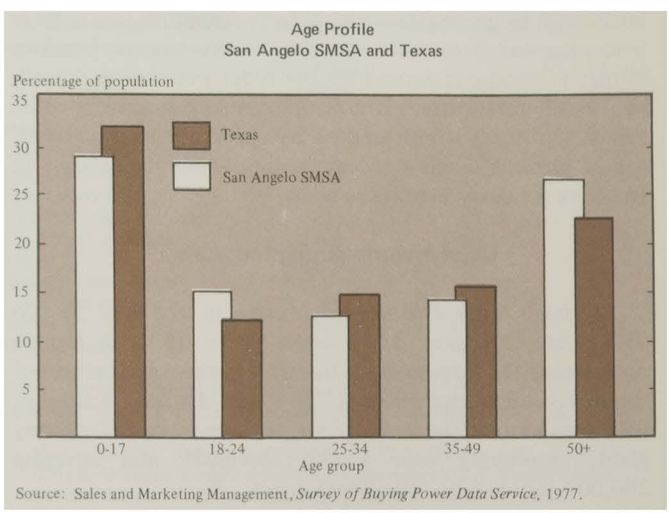
San Angelo has wisely chosen to broaden its economic base by promoting the future of its manufacturing and communication industries instead of relying solely on agriculture or trade. This expansion of opportunity not only encourages in-migration and economic health but also prevents total collapse if a particular industry or firm should leave the San Angelo area. Unlike other smaller metropolitan areas, the out-migration of young people after high school graduation is not as great since there are educational facilities and a good job market available near their homes.

The citizens of San Angelo have not placed total emphasis on economic prosperity, however. Realizing that a clean, attractive city has drawing power as well, efforts have succeeded in making San Angelo a very pleasing location in which to live and work. The Concho River, which meanders through downtown, has been improved by the addition of parks and recreation areas. In addition, high-rise residential buildings provide beauty and variety to the usually flat West Texas landscape.

The future of the San Angelo SMSA corresponds to the general growth and progress of Texas in particular and the United States as a whole. Manufacturing is not dependent upon the life or death of one industry; manufacturers in the San Angelo SMSA are optimistic about the continued growth of the San Angelo market, and some, like Ethicon, Inc., are planning to expand their present facilities. Given that the present economic and growth outlook is quite good, San Angelo has successfully made the transition from an agrarian to a manufacturing area and should be a strong magnet for industry and a solidly prosperous municipality.



*Household effective buying income is the total income of all household members after taxes.
Source: Sales and Marketing Management, *Survey of Buying Power Data Service*, 1977.



Source: Sales and Marketing Management, *Survey of Buying Power Data Service*, 1977.

Local Business Conditions

Statistical data compiled by Mildred Anderson, Marylyn Donaldson, Jean Hall, and Mercedes Torres.

Standard metropolitan statistical areas (SMSAs) include one or more entire counties, as shown. All SMSAs are designated as such by the U.S. Bureau of the Census. Population figures are from the 1970 census and 1976 estimates by the Bureau of the Census.

Building permit data are collected from municipalities by the Bureau of Business Research in cooperation with the Bureau of the Census. They represent only building authorizations within city limits and exclude federal contracts and public works projects, such as highways, waterways, and reservoirs. Building statistics for the latest month are subject to revision.

Employment estimates include only wage and salary workers and are compiled by the Texas Employment Commission in cooperation with the U.S. Bureau of Labor Statistics.

Indicators of Local Business Conditions for Texas Standard Metropolitan Statistical Areas

Reported area and indicator	Mar 1978	Percent change from Feb 1978	Percent change from Mar 1977
ABILENE SMSA			
Callahan, Jones, and Taylor Counties; population: 122,164 (1970); 131,500 (1976 est.)			
Urban building permits ($1,000)	8,927	147	2,581
Nonfarm employment	46,030	1	**
Manufacturing employment	5,210	2	– 17
Unemployed (percentage)	4.8	– 14	9
AMARILLO SMSA			
Potter and Randall Counties; population: 144,396 (1970); 154,300 (1976 est.)			
Urban building permits ($1,000)	18,574	213	– 9
Nonfarm employment	69,110	**	2
Manufacturing employment	8,250	– 6	– 6
Unemployed (percentage)	3.9	– 5	5
AUSTIN SMSA			
Hays, Travis, and Williamson Counties; population: 360,463 (1970); 461,300 (1976 est.)			
Urban building permits ($1,000)	36,159	19	72
Nonfarm employment	209,900	1	6
Manufacturing employment	24,000	1	10
Unemployed (percentage)	3.1	– 11	– 21
BEAUMONT-PORT ARTHUR-ORANGE SMSA			
Hardin, Jefferson, and Orange Counties; population: 347,568 (1970); 355,500 (1976 est.)			
Urban building permits ($1,000)	15,962	84	– 32
Nonfarm employment	143,450	1	3
Manufacturing employment	41,150	1	10
Unemployed (percentage)	6.3	– 17	– 14
BROWNSVILLE-HARLINGEN-SAN BENITO SMSA			
Cameron County; population: 140,368 (1970); 179,500 (1976 est.)			
Urban building permits ($1,000)	5,273	23	41
Nonfarm employment	52,110	1	6
Manufacturing employment	10,140	4	29
Unemployed (percentage)	9.6	– 15	– 15
BRYAN-COLLEGE STATION SMSA			
Brazos County; population: 57,978 (1970); 73,000 (1976 est.)			
Urban building permits ($1,000)	4,906	22	16
Nonfarm employment	31,350	**	3
Manufacturing employment	2,590	– 3	7
Unemployed (percentage)	2.4	– 27	– 23
CORPUS CHRISTI SMSA			
Nueces and San Patricio Counties; population: 284,832 (1970); 298,400 (1976 est.)			
Urban building permits ($1,000)	21,617	117	185
Nonfarm employment	104,850	**	3
Manufacturing employment	13,100	– 1	3
Unemployed (percentage)	5.7	– 11	– 22
DALLAS-FORT WORTH SMSA			
Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties; population: 2,378,353 (1970); 2,585,300 (1976 est.)			
Urban building permits ($1,000)	243,557	60	50
Nonfarm employment	1,214,700	1	4
Manufacturing employment	275,600	1	5
Unemployed (percentage)	4.1	– 13	– 13
EL PASO SMSA			
El Paso County; population: 359,291 (1970); 425,200 (1976 est.)			
Urban building permits ($1,000)	30,901	74	61
Nonfarm employment	140,600	**	1
Manufacturing employment	28,300	– 1	**
Unemployed (percentage)	9.1	– 7	– 25
GALVESTON-TEXAS CITY SMSA			
Galveston County; population: 169,812 (1970); 186,300 (1976 est.)			
Urban building permits ($1,000)	5,166	36	12
Nonfarm employment	69,120	**	5
Manufacturing employment	10,960	– 5	– 6
Unemployed (percentage)	6.1	– 13	– 21
HOUSTON SMSA			
Brazoria, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties; population: 1,999,316 (1970); 2,392,100 (1976 est.)			
Urban building permits ($1,000)	196,916	28	30
Nonfarm employment	1,214,600	1	7
Manufacturing employment	198,600	**	5
Unemployed (percentage)	3.7	– 16	– 14
KILLEEN-TEMPLE SMSA			
Bell and Coryell Counties; population: 159,794 (1970); 204,600 (1976 est.)			
Urban building permits ($1,000)	11,122	44	58
Nonfarm employment	49,480	1	**
Manufacturing employment	7,030	1	10
Unemployed (percentage)	4.9	– 14	– 17

Reported area and indicator	Mar 1978	Percent change from Feb 1978	Percent change from Mar 1977
LAREDO SMSA			
Webb County; population: 72,859 (1970); 82,700 (1976 est.)			
Urban building permits ($1,000)	2,990	136	21
Nonfarm employment	25,520	**	3
Manufacturing employment	2,100	1	2
Unemployed (percentage)	14.8	– 1	15
LONGVIEW SMSA			
Gregg and Harrison Counties; population: 120,770 (1970); 127,900 (1976 est.)			
Urban building permits ($1,000)	11,112	247	– 20
Nonfarm employment	55,170	2	4
Manufacturing employment	17,890	2	8
Unemployed (percentage)	5.5	– 10	– 7
LUBBOCK SMSA			
Lubbock County; population: 179,295 (1970); 199,600 (1976 est.)			
Urban building permits ($1,000)	13,966	45	– 3
Nonfarm employment	83,640	**	5
Manufacturing employment	12,540	1	15
Unemployed (percentage)	3.6	– 16	– 5
McALLEN-PHARR-EDINBURG SMSA			
Hidalgo County; population: 181,535 (1970); 230,300 (1976 est.)			
Urban building permits ($1,000)	8,145	– 1	48
Nonfarm employment	62,220	2	3
Manufacturing employment	8,100	5	– 1
Unemployed (percentage)	12.5	– 18	44
MIDLAND SMSA			
Midland County; population: 65,433 (1970); 71,400 (1976 est.)			
Urban building permits ($1,000)	15,905	239	315
Nonfarm employment	33,740	**	9
Manufacturing employment	2,800	– 1	51
Unemployed (percentage)	3.7	– 5	**
ODESSA SMSA			
Ector County; population: 92,660 (1970); 100,900 (1976 est.)			
Urban building permits ($1,000)	3,361	27	– 56
Nonfarm employment	46,680	**	6
Manufacturing employment	6,130	1	3
Unemployed (percentage)	3.4	– 8	**
SAN ANGELO SMSA			
Tom Green County; population: 71,047 (1970); 77,200 (1976 est.)			
Urban building permits ($1,000)	2,728	– 32	– 2
Nonfarm employment	31,180	1	8
Manufacturing employment	5,690	1	7
Unemployed (percentage)	3.0	– 12	– 17
SAN ANTONIO SMSA			
Bexar, Comal, and Guadalupe Counties; population: 888,179 (1970); 987,200 (1976 est.)			
Urban building permits ($1,000)	28,934	59	34
Nonfarm employment	350,150	1	4
Manufacturing employment	44,200	1	8
Unemployed (percent)	6.1	– 9	– 5
SHERMAN-DENISON SMSA			
Grayson County; population: 83,225 (1970); 81,900 (1976 est.)			
Urban building permits ($1,000)	1,361	118	39
Nonfarm employment	31,980	1	8
Manufacturing employment	11,910	1	13
Unemployed (percentage)	5.9	– 15	– 18
TEXARKANA SMSA			
Bowie County, Texas; Little River and Miller Counties, Arkansas; population: 113,488 (1970); 117,800 (1976 est.)			
Urban building permits ($1,000)	9,408	513	256
Nonfarm employment	41,070	– 1	2
Manufacturing employment	7,530	– 8	– 3
TEXARKANA SMSA (continued)			
Unemployed (percentage)	7.6	– 6	**
(Since the Texarkana SMSA includes Bowie County in Texas and Little River and Miller Counties in Arkansas, all data, including population, refer to the three-county region.)			
TYLER SMSA			
Smith County; population: 97,096 (1970); 108,900 (1976 est.)			
Urban building permits ($1,000)	4,620	25	6
Nonfarm employment	45,870	**	3
Manufacturing employment	12,370	**	1
Unemployed (percentage)	4.3	– 14	– 10
WACO SMSA			
McLennan County; population: 147,553 (1970); 155,400 (1976 est.)			
Urban building permits ($1,000)	7,034	37	6
Nonfarm employment	64,920	1	4
Manufacturing employment	15,600	**	5
Unemployed (percentage)	5.1	– 7	16
WICHITA FALLS SMSA			
Clay and Wichita Counties; population: 128,642 (1970); 129,200 (1976 est.)			
Urban building permits ($1,000)	2,510	19	– 10
Nonfarm employment	48,840	1	6
Manufacturing employment	8,940	2	20
Unemployed (percentage)	3.6	– 16	– 16

**Absolute change is less than one-half of 1 percent.

Selected Barometers of Texas Business
(Indexes—adjusted for seasonal variation—1967=100)

Index	Mar 1978	Feb 1978	Year-to-date average 1978	Percent change: Mar 1978 from Feb 1978	Percent change: Year-to-date average 1978 from 1977
Crude oil production	98.8[p]	96.8[p]	98.3	2	– 5
Total electric power use	223.7[p]	232.9[p]	222.1	– 4	9
Residential	225.5[p]	318.7[p]	262.2	– 29	– 1
Industrial	178.0[p]	179.0[p]	178.3	– 1	6
Total nonfarm employment	155.5[p]	154.4[p]	154.7	1	4
Manufacturing employment	141.8[p]	141.0[p]	141.2	1	6
Average weekly earnings—manufacturing	215.7[p]	211.2[p]	212.0	2	10
Average weekly hours—manufacturing	100.4[p]	97.8[p]	98.4	3	1
Total unemployment	163.4[p]	183.8[p]	177.1	– 11	– 2
Insured unemployment	214.2[p]	225.3[p]	220.0	– 5	– 13
Initial claims on unemployment insurance	160.1[p]	168.6[p]	168.7	– 5	– 13

[p]Preliminary.

Erratum: The title of the table appearing on page 59 of the March 1978 *Texas Business Review* should read: Dallas-Fort Worth Manufacturing, 1963 and 1972.

Barometers of Texas Business

(All figures are for Texas unless otherwise indicated.)

All indexes are based on the average months for 1967=100 except where other specification is made; all except annual indexes are adjusted for seasonal variation unless otherwise noted. Employment estimates are compiled by the Texas Employment Commission in cooperation with the Bureau of Labor Statistics of the U.S. Department of Labor. The symbols used below impose qualifications as indicated here: p–preliminary data subject to revision; r–revised data; *–dollar totals for the fiscal year to date; †–employment data for wage and salary workers only.

	Mar 1978	Feb 1978	Mar 1977	Year-to-date average 1978	Year-to-date average 1977
GENERAL BUSINESS ACTIVITY					
Wholesale prices in U.S. (unadjusted index)	203.8	202.0	192.0	201.9	190.0
Consumer prices in Dallas (unadjusted index)	...	186.7	...	...	...
Consumer prices in U.S. (unadjusted index)	189.8	188.3	178.2	188.3	176.9
Sales of ordinary life insurance (index)	338.4	308.5	279.6	326.8	274.7
PRODUCTION					
Total electric power use (index)	223.7^{p}	232.9^{p}	201.8^{r}	222.1	204.1
Residential electric power use (index)	225.5^{p}	318.7^{p}	248.4^{r}	262.2	264.3
Industrial electric power use (index)	178.0^{p}	179.0^{p}	169.8^{r}	178.3	108.4
Crude oil production (index)	98.8^{p}	96.8^{p}	104.0^{r}	98.3	103.7
Average daily production per oil well (bbl.)	17.3	17.1	18.0^{r}	17.3	18.0
Industrial production–total (index)	146.3^{p}	143.5^{p}	138.1^{r}	144.8	137.5
Industrial production–total manufactures (index)	156.4^{p}	152.5^{p}	145.2^{r}	154.0	144.8
Industrial production–durable manufactures (index)	167.8^{p}	161.6^{p}	147.6^{r}	164.5	146.6
Industrial production–nondurable manufactures (index)	147.5^{p}	145.3^{p}	143.3^{r}	145.7	143.4
Industrial production–mining (index)	116.0^{p}	115.4^{p}	115.6^{r}	116.5	114.6
Industrial production–utilities (index)	198.6^{p}	198.6^{p}	183.1^{r}	198.6	183.4
Industrial production in U.S. (index)	141.0^{p}	139.0^{p}	135.3^{r}	139.5	133.6
Estimated cost of urban construction by permits authorized (thousands)	$ 760.6^{p}	$ 511.5^{p}	$ 558.0^{r}	$ 1,796.2*	$ 1,337.9*
Estimated new residential construction authorized (thousands)	$ 405.3^{p}	$ 272.5^{p}	$ 294.4^{r}	$ 967.2*	$ 692.4*
Estimated new residential units authorized (number)	14,038^{p}	9,430^{p}	12,474^{r}	33,853*	21,627*
Estimated new nonresidential construction authorized (thousands)	$ 290.6^{p}	$ 194.5^{p}	$ 195.4^{r}	$ 677.0*	$ 501.0*
AGRICULTURE					
Prices received by farmers (unadjusted index)	203	202	202	197	186
Prices paid by farmers in U.S. (unadjusted index)	214	211	202	211	200
Ratio of Texas farm prices received to U.S. prices paid by farmers	94.9	95.7	100.0	93.4	93.0
FINANCE					
Bank commercial loans outstanding (index)	240.3	230.7	199.1	230.5	197.9
Weekly condition report of large commercial banks, Dallas Federal Reserve District					
Loans (millions)	$ 15,073	$ 14,836	$ 12,171	$ 14,853	$ 12,079
Loans and investments (millions)	$ 21,549	$ 21,379	$ 18,505	$ 21,471	$ 18,326
Adjusted demand deposits (millions)	$ 5,154	$ 4,917	$ 5,218	$ 5,152	$ 5,089
Revenue receipts of the state comptroller (thousands)	$ ...	$ ...	$ 586.0	$ ...	$ 577.3
Federal Internal Revenue collections (millions)	$ 2,114.9	$ 1,540.4	$ 2,038.0	$ 10,345.8*	$ 9,362.6*
Securities registrations–original applications					
Mutual investment companies (thousands)	$ 165,284	$ 64,794	$ 85,813	$ 850,783*	$ 620,864*
All other corporate securities					
Texas companies (thousands)	$ 7,948	$ 8,842	$ 8,266	$ 73,621*	$ 86,437*
Other companies (thousands)	$ 15,511	$ 13,298	$ 15,824	$ 136,768*	$ 89,681*
Securities registration–renewals					
Mutual investment companies (thousands)	$ 35,675	$ 156,267	$ 62,228	$ 272,457*	$ 324,105*
Other corporate securities (thousands)	$ 0	$ 2,483	$ 9	$ 4,653*	$ 4,110*
LABOR					
Total nonagricultural employment (index)†	155.5^{p}	154.4^{p}	149.1^{r}	154.7	148.1
Manufacturing employment (index)†	141.8^{p}	141.0^{p}	134.2^{r}	141.2	133.4
Average weekly hours–manufacturing (index)†	100.4^{p}	97.8^{p}	98.7^{r}	98.4	97.9
Average weekly earnings–manufacturing (index)†	215.7^{p}	211.2^{p}	194.8^{r}	212.0	191.9
Total nonagricultural employment (thousands)†	5,015.2^{p}	4,968.9^{p}	4,808.3^{r}	4,981.7	4,767.8
Total manufacturing employment (thousands)†	930.0^{p}	924.9^{p}	880.2^{r}	925.8	875.5
Durable-goods employment (thousands)†	525.4^{p}	522.4^{p}	485.8^{r}	522.7	483.7
Nondurable-goods employment (thousands)†	404.6^{p}	402.5^{p}	394.3^{r}	403.1	391.8
Total civilian labor force in selected labor market areas (thousands)	4,899.5^{p}	4,813.6^{p}	4,649.4^{r}	4,859.2	4,644.8
Nonagricultural employment in selected labor market areas (thousands)†	4,266.3^{p}	4,230.3^{p}	4,072.4^{r}	4,235.9	4,033.0
Manufacturing employment in selected labor market areas (thousands)†	780.7^{p}	777.9^{p}	742.3^{r}	777.5	737.9
Total unemployment in selected labor market areas (thousands)	233.5^{p}	264.8^{p}	249.6^{r}	257.2	288.5
Percent of labor force unemployed in selected labor market areas	4.8^{p}	5.5^{p}	5.4^{r}	5.3	6.2
Percent of total labor force unemployed	4.7^{p}	5.4^{p}	5.3^{r}	5.2	6.1

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