The U.S.–Mexico border region is experiencing unparalleled trade and exchange as cross-border flows of goods and people continue to reach new highs. The U.S. border economy thrives on the daily influx of tourists, shoppers, workers and immigrants from Mexico. Approximately 700,000 Mexicans cross legally into the United States every day to shop and work, returning at night to their homes in Mexico.

A much smaller number of border crossers come illegally. Illegal immigrants represent only about 0.5 percent of total south–north border crossings. Still, the continuous flow of illegal aliens over the past 35 years has contributed to an illegal immigrant population estimated at between 7 million and 9 million people—about 60 percent of them from Mexico.

As illegal immigration has increased, so has border enforcement. Between 1978 and 1999, the U.S. Border Patrol quadrupled in size. The most rapid rise came between 1992 and 1999, when the number of agents more than doubled, from 3,651 to 7,982. Not only is the number of agents greater, but time spent patrolling the border grew from 1.9 million hours in 1985 to 8.6 million in 1999. And since 1970, as a percentage of the federal budget, enforcement funds have increased 338 percent.

Other agencies also have a heightened presence on the border. The U.S. Customs Service and the Immigration and Naturalization Service (INS) have intensified their ports-of-entry inspections. And, with the increase in drug trafficking, the Drug Enforcement Agency and the Bureau of Alcohol, Tobacco and Firearms maintain an increased presence as well.

The expansion of federal government agencies in Southwest border cities has brought both social and economic benefits. Between 1983 and 1999, for example, federal government employment increased 400 percent in Laredo and over 200 percent in both Brownsville and McAllen. The influx of federal employees has been an economic boon to areas often lacking what are described as stable, high-paying jobs.

Heightened police presence also has reduced crime rates in cities where enforcement crackdowns are centered, such as El Paso and San Diego. Increased policing has some negative side effects, however, and border residents say these include agents being present on private property and vehicle stops becoming routine. Courts are also clogged with an unprecedented number of criminal cases because of tougher penalties on illegal entrants and smugglers.

Despite the dramatic increase in enforcement, the impact on the volume of illegal immigration is not clear. The number of illegal alien apprehensions has not declined. Also, research shows that the majority of illegal aliens deported to Mexico continue to attempt crossings until they succeed. Some observers have concluded that border enforcement has not deterred illegal immigration. Other research, however, shows that increased enforcement traps workers in Mexican border cities and prevents them from entering the United States.1

This article examines border enforcement’s effectiveness through developments in the smuggling industry. All other things the same, if enforce-
ment is having an impact, there should be rising smuggler use rates and higher smugglers’ fees, as well as changes in border crossing points away from heavily enforced areas.

**Rise in Illegal Immigration**

Driving Mexico–U.S. migration are the higher wages and job availability prevailing in the United States. Underdeveloped capital markets in Mexico are a contributing factor because they make borrowing difficult for most people. In surveys, migrants often cite the need for capital to start businesses, build houses, repay loans or pay for medical procedures as a main reason for migrating to the United States. The policy backdrop in the receiving country also can be important. Laws that exist but are not enforced, such as sanctions on employers who hire undocumented workers, signal acceptance of illegal immigration.

Also key to migration is information, which flows mainly through networks of family members and friends with prior migration experience. The Bracero Program, a guest-worker program in effect between 1942 and 1964, brought in about 200,000 workers annually from Mexico. Braceros established thousands of networks with U.S. recruiters and employers. When the Bracero agreement was abandoned, no legal worker exchange was put in its place. Hence, a new era of largely illegal immigration ensued.

The new era had a slow start, in part because of the war in Vietnam and strong economic growth in Mexico in the 1960s. But by the early 1970s, Mexican migration to the United States was accelerating again. Facilitating movement to the United States during this period was the border region’s increased accessibility. Infrastructure development and the growth of twin cities along the border, such as Tijuana/San Diego and Ciudad Juárez/El Paso, made the border more accessible to travelers from central Mexico.

Before 1930, no major road connected the Mexican interior with any U.S. border city. Most roads linking the interior to the border were built between 1940 and 1960. Similarly, commercial air transportation during these years expanded dramatically. With these improvements, travel times were significantly shortened, thus lowering the costs of Mexico–U.S. migration.

As a result of the factors mentioned above—including higher relative U.S. wages and the expansion of networks and infrastructure—migration rates more than doubled between 1965 and 1997. Chart 1 shows the Mexico–U.S. migration rate constructed from the Mexican Migration Project (MMP), a household-based survey. The migration rate, which is the ratio of migrants to the total number of migrants and non-migrants, includes both legal and illegal trips by working-age household heads. During the sample period, the likelihood of migrating rises from 3.7 percent to above 9.6 percent. Sustained increases in migration occurred in the 1970s and the mid-1980s, with an all-time peak of nearly 10 percent in 1988.

Border Patrol apprehensions data are also of interest, although changes in apprehensions reflect changes in both enforcement intensity and the number of illegal border crossings. Chart 2 shows the INS apprehensions time series along with the illegal immigration rate from the MMP data. Apprehensions increased from about 21,000 in 1960 to more than 1.5 million in 1999, with steep increases in the 1970s, in the mid-1980s leading up to passage of the Immigration Reform and Control Act.
The Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996 followed up on some of IRCA’s provisions by increasing penalties for illegal entry, alien smuggling and document fraud. IIRIRA also mandated a doubling of the Border Patrol by 2001, imposed limited judicial review of deportation orders and established an income requirement on sponsors of legal immigrants.

**Smuggler Use Rates and Fees**

We cannot directly measure changes in apprehension probability because the total number of illegal immigrants crossing the Southwest border is unknown. Instead, we can look at illegal immigrants’ tendency to hire smugglers, also known as “coyotes,” and the evolution of coyote prices over time. Migrants are more likely to hire coyotes when they perceive a higher chance of apprehension were they to attempt a crossing on their own. If coyotes are more in demand or if risks increase, as is the case when criminal penalties on smuggling are increased, then we expect coyote use and prices to rise.

Coyote use rates provide some evidence that despite the increasing volume of illegal immigration, migrants’ costs were rising during the two earlier enforcement phases. Chart 4 plots the percentage of illegal immigrants hiring coyotes in each year. Coyote use rates increased in 1970 and trended upward for the rest of that decade. By 1979, more than 70 percent of illegal immigrants in the sample were hiring coyotes. After softening in the early 1980s, coyote use rates leveled off at a high level during the IRCA years (1986–90). New highs were then hit throughout the 1990s.

Chart 4 also shows that despite increasing coyote use rates, coyote prices were in steep decline until 1994. Median reported smugglers’ fees fell from $941 in 1965 to $300 in 1994 (constant dollars), suggesting that increases in the supply of smugglers outpaced the increase in demand. Several factors contributed to the rise in smuggler supply. First, the border’s improved accessibility through the building of roads and expansion of bus, rail and airway

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Chart 3
Border Patrol Linewatch Hours, 1964–99

<table>
<thead>
<tr>
<th>Hours (in millions)</th>
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<th>Phase 2</th>
<th>Phase 3</th>
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*Source: Immigration and Naturalization Service.*

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**Evaluating Border Enforcement**

U.S. authorities responded to rising illegal immigration by increasing enforcement. As shown in Chart 3, border enforcement—measured by the number of hours Border Patrol agents spend on linewatch duty—grew in three phases between 1964 and 1999. For enforcement to deter illegal immigration, it must raise the costs undocumented migrants face. This is usually done by increasing the probability of apprehension but also can occur if the migrant faces other increased risks, such as the chance of death or injury. Has the probability of being apprehended, and hence the cost and risk to the migrant, increased during the enforcement periods under study?

**Three Phases of Enforcement**

In early enforcement efforts, up until 1986, linewatch hours lagged the influx of migrants. Hours rose in the late 1970s when the Carter administration increased INS funding, but most new resources went to hardware and equipment. During the Reagan administration, IRCA’s passage took INS expansion to a new level. A large portion of the 33 percent increase in INS funding was earmarked for the Border Patrol, and the effect on linewatch hours is apparent in Chart 3.

At this time, Congress also strengthened penalties against migrant smugglers and imposed sanctions on employers of undocumented workers. Whereas penalties on smugglers and increased dollars for enforcement were intended to curtail the supply of undocumented workers, the employer sanctions were intended to limit demand by imposing fines on first offenses and criminal penalties on repeat offenses.

The third phase of enforcement started in 1993. The strategy was labor intensive and marked the biggest increase in linewatch hours. The objective was to make illegal immigration costly by diverting illegal traffic out of border cities and away from roads and buildings. Agents took up fixed positions along commonly used paths within urban areas, which, along with fencing and surveillance equipment, forced illegal entrants into the brush. Once in remote areas, they were more easily spotted and detained by the Border Patrol. The strategy was first implemented in El Paso in 1993 (Operation Hold-the-Line), then in 1994 in San Diego (Operation Gatekeeper) and Nogales, Ariz. (Operation Safeguard), and last in 1997 in southeast Texas (Operation Rio Grande).

Meanwhile, the MMP rate of illegal immigration dropped sharply after IRCA, partly due to the IRCA amnesty that legalized many migrants in the MMP survey. Other data, such as those based on the U.S. Census or Current Population Survey, do not show a drop in illegal immigration until around 1991.
service significantly lowered transportation costs. Second, free entry into the industry by experienced migrants also increased supply. Third, the growth of the illicit drug trade during the 1980s attracted more smugglers as well.

As Chart 4 shows, not until the mid-1990s did coyote prices reverse their downward trend. This reversal coincides with the third phase of border enforcement, seemingly the most successful to date. Moreover, linewatch hours (Chart 3) and coyote use rates (Chart 4) are at record highs, and apprehensions (Chart 2) are on the rise. For the first time, widespread anecdotal evidence reveals that border crossers are being apprehended with such frequency that they turn back, giving up on their hopes of reaching the United States. There is also evidence of migrants trapped in Mexican border cities, unable to cross into the United States.

**The New Enforcement Strategy**

Another telling sign that recent border crackdowns are working is the disruption of long-standing border-crossing patterns. Today, immigrants favor crossing points in Texas and Arizona rather than once-popular spots in California. Within states, change is also noticeable. In California, migrants choose to cross the harsh deserts of El Centro rather than risk a crossing near San Diego. In Texas, migrants are less likely to attempt an El Paso crossing, preferring to enter the United States farther south through Laredo, McAllen, Brownsville and, most recently, Del Rio.

**Interstate Reallocation of Migrants.** From the survey data in Chart 5, we can see that one-half to three-fourths of all border crossings between 1965 and 1990 were into California. Following IRCA, the fraction of California crossings declined and the propensity to cross into Texas increased. These trends were intensified after Operation Gatekeeper’s 1994 implementation in San Diego, which also led to increased crossings into Arizona, although that effect is not evident in the survey data for these years. The trends suggest that with the passing of IRCA and later the implementation of Operation Gatekeeper, border enforcement in California became more effective relative to Texas. Border crossers responded by shifting to Texas.

**Intrastate Reallocation of Migrants.** Within Texas the changes are equally striking. Chart 6 shows that the increase in Texas crossings beginning in 1990 was almost entirely concentrated around El Paso. The resumption of crossings in El Paso influenced the decision to implement Operation Hold-the-Line in 1993. The crackdown resulted in a 75 percent decrease in the number of El Paso apprehensions within one year. Consequently, apprehensions in McAllen, Laredo and Del Rio rose steeply during 1995–97. This evidence suggests migrants switched from heavily enforced crossing points like El Paso to places farther south, where they could cross with relative ease.

**Border-Crossing Deaths.** The new border enforcement strategy was intended to eliminate illegal alien traffic from city centers. The consequence has been to divert migrants into more sparsely populated areas. Illegal immigrants today cross through inhospitable terrain and expose themselves to dangerous climatic extremes to a much larger extent than they did 10 or 20 years ago. Critics of the border offensives claim that injuries and deaths along the border are at an all-time high as a result. The number of crossing-related deaths in 1999 was an estimated 324, up from single digits before 1995. Deaths in 2000 are

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**Chart 4**

Smuggler Use Rates and Fees, 1965–97

**Chart 5**

Border Crossings by State, 1965–94
believed to have numbered 388. The Mexican estimate is 430.

Conclusion

In the post-World War II era, boundaries between Mexico and the United States have diminished. A hundred years ago, the wage differences were as large as they are today, yet there was little migration between the two countries. Exchange of people and goods was limited by distance, the lack of roads and transportation, a scarcity of information, and language and cultural differences. After 50 years of large-scale migration and settlement, today’s scenario is vastly different. U.S.–Mexico trade and migration have grown significantly. Illegal immigration and the resultant border enforcement have been the natural outcome of an integrated labor market divided by an international boundary.

In the face of increasing illegal immigration, enforcement efforts have had mixed results. Early efforts in the 1970s and 1980s were largely ineffectual. They succeeded in raising coyote use rates among migrants, which created a flourishing smuggling industry offering steadily decreasing fees. The more recent enforcement initiatives have been more successful, driving up coyote prices and possibly discouraging more migrants from trying to cross the border. Additional evidence is the change in migrants’ crossing patterns. When the Border Patrol has cracked down on one area, migrants have responded by crossing elsewhere. Unfortunately, as border-crossing options have been reduced, migrants are risking more to make it to the United States, resulting in more crossing-related deaths than ever before.

The controversy over illegal immigration and tougher border enforcement is being played out along the Southwest border. While the national economy benefits from the influx of workers, the border economy deals with many of the costs associated with illegal immigration. Along with the benefit from increased enforcement through the influx of relatively high-paying government jobs and reduced crime rates comes the price tag associated with detaining and prosecuting large numbers of illegal immigrants and smugglers. An agreement allowing the temporary yet legal inflow of Mexican labor would not end enforcement on the border but would let authorities concentrate more on drug interdiction and less on undocumented workers.

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Notes

1 Gordon H. Hanson, Raymond Robertson and Antonio Spilimbergo (1999), “Does Border Enforcement Protect U.S. Workers from Illegal Immigration?” NBER Working Paper Series no. 7054 (Cambridge, Mass.: National Bureau of Economic Research, March). This paper, in studying the effects of illegal immigration on wages in border states, found no effect of border enforcement on U.S. wages but did find an effect on wages of young males in Tijuana. This finding suggests that border enforcement may be having an impact, trapping would-be migrants on the Mexican side.


3 The Mexican Migration Project (MMP) interviewed 5,878 households in nine states in western Mexico between 1987 and 1997. Family, job and migration histories were collected, including information on all U.S. trips—network, legal status, mode and location of border crossing, whether a smuggler was hired and, if so, the smuggler’s fee. The data are publicly available: Mexican Migration Project (1999), Population Studies Center, University of Pennsylvania, Philadelphia, www.pop.upenn.edu/mexmig/welcome.html
