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10-2016

Borderplex Economic Outlook to 2018

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Price $10

Business Report SR16-1

Borderplex Economic Outlook to 2018

The University of Texas at El Paso

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Business Report SR16-1

plus BRMP Policy Brief PB16-1

UTEP Border Region Modeling Project

Price $10

This business report is a publication of the Border Region Modeling Project and the Department of Economics & Finance at the University of Texas at El Paso. For additional Border Region information, please visit the www.academics.utep.edu/border section of the UTEP web site.

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Economic Impacts of Border Congestion Alleviation*

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Acknowledgements

Overview

The ports of entry connecting El Paso with neighboring Ciudad Juárez, Mexico, are vital conduits of international trade and commerce. In 2015, 98 billion dollars in exports and imports passed through the El Paso Customs District (USITC, 2016). Furthermore, the international bridges within the city limits registered more than six million pedestrian crossings and more than twelve million personal vehicle crossings in that year (BTS, 2016). Many residents of Ciudad Juárez routinely cross into El Paso for shopping excursions, resulting in significant cross-border retail exports (Coronado & Phillips, 2007). Other strategic sectors of El Paso's economy, such as transportation and logistics, also rely on smoothly-functioning ports of entry (Orrenius et al., 2016). Overall, El Paso's economic fortunes are inextricably linked with those of its neighbor city south of the border.

Long wait times at the ports of entry pose an obstacle to international commerce and manufacturing. Not surprisingly, long wait times affect the economic health of El Paso, the State of Texas, and the United States. A number of studies confirm the adverse impacts of border-crossing delays in the Borderplex region. The Texas Transportation Institute analyzed one of the main cross-border arteries, the Bridge of the Americas. The results show that above-average wait times at that port of entry generate direct costs of $17,452 per day for freight shippers (Vadali et al., 2011). A study by Cambridge Systematics projected increases in travel time due to border delays from 2010 to 2035. Given existing infrastructure constraints, cargo vehicle delays are projected to rise to 11 hours by the latter date if no further steps are taken to alleviate congestion. Cumulatively, those delays are estimated to reduce regional economic output by $12 billion and curtail jobs by around 140,000 positions by 2035 (CS, 2011). Accenture estimates that delays at the El Paso ports of entry result in economic losses for the nation as a whole totaling $1.5 billion per year in lost output, 6,700 fewer jobs, $400 million in lost wages, and $200 million in lost tax revenues (Accenture, 2008).

Various solutions have been proposed to alleviate the adverse economic impacts of border-crossing delays in the El Paso area. One proposal is to increase the number of customs officers at existing ports of entry. Two recent peer-reviewed articles evaluate the

potential economic benefits that accrue from such a policy. One study simulates the effects of adding an additional customs officer at 17 land passenger ports of entry. The addition of one customs inspection official at each of the three major land passenger ports within El Paso is calculated to increase total personal vehicle trips by 232,113 above the 2012 level (about a 2.5% increase) due to lower wait times. The value of time saved due to lower passenger vehicle wait times in El Paso is estimated at $4 million per year. On average, across all 17 ports of entry, one additional customs officer at each land port is expected to increase US GDP by $3.6 million and to yield an additional 62 jobs (Roberts et al., 2014). Adding one additional customs officer at each of 12 land freight crossings is also predicted to yield substantial economic benefits. In particular, this modest staffing increase is predicted to decrease cargo truck transportation costs by about $760,000 per year for the two ports of entry in El Paso due to shortened transit times (Roberts et al., 2014; Avetisyan et al. 2015).

Basic Impact Estimates for Hiring One Additional Customs Officer for One Year:
U.S. GDP Gains = $2.38 Million
U.S. Job Gains = 37
U.S. Federal Tax Gains = $230,000

Background on Economic Impacts of Border-Crossing Delays

Long wait times at ports of entry affect regional economies in a variety of ways. One impact comes in the form of reduced cross-border shopping. In a survey of Mexican visitors conducted at shopping areas in the lower Rio Grande valley, 57 percent of respondents indicated that they were not willing to wait more than an hour to cross the border for a shopping excursion (Ghaddar et al., 2004). By the same token, long border-crossing delays are also likely to deter Mexican nationals from crossing the border to attend border city entertainment events in the United States. Furthermore, border delays may hinder work-related trips, cause excessive tardiness, and result in lost business opportunities (CS, 2011). Many US citizens in border cities commute to work across the border on a daily basis or, in other cases, cross the border on an irregular basis for meetings or other work obligations. Thus, increased capacity

to process pedestrian and passenger vehicle traffic at ports of entry is likely to facilitate economic transactions of various types within the border region.

Besides pedestrian and personal vehicle trips, freight transportation is also sensitive to long delays in crossing the border. Long waits at the border generate direct costs in the form of truck driver wages, vehicle fuel usage, and periodic spoilage of perishable cargo (Globerman and Storer, 2011; Walke and Fullerton, 2014). There are also indirect costs of delays. For example, US plants that practice just-in-time (JIT) inventory management may have to suspend processing of goods if scheduled shipments of parts from suppliers in Mexico arrive late due to border delays. Many of the export-processing plants in Ciudad Juárez employ JIT production strategies and ship goods to locations within the United States for further processing on tight schedules (Vadali et al., 2011). When firms expect long or unpredictable delays in crossing the border, they may be forced to accumulate larger-than-efficient inventories as hedges against potentially late arrival of future shipments (Taylor et al., 2004; Cedillo-Campos et al., 2014). The costs associated with inefficiently high inventory levels represent additional, indirect costs that border delays impose on manufacturers that are integrated into cross-border supply chains.

Estimated Costs of Bottlenecks at the US-Mexico Border

Various studies examine the impacts of transportation bottlenecks at the US-Mexico border. A 2008 report by Accenture estimates national output losses related to southern border crossing delays at $5.8 billion annually (see Table 1). In 2008, border delays were also responsible for 26,000 job losses, $1.4 billion in lost wages, and $600 million in foregone tax revenues according to the report (Accenture, 2008). In Texas alone, border delays are estimated to reduce output by $1.7 billion and to reduce the number of jobs within the state by 8,500. The report also estimates the nationwide effects of bottlenecks at each of the major southern border ports. Average wait times of 47 minutes at the El Paso ports of entry are estimated to cost $1.5 billion per year in lost output, 6,700 lost jobs, $400 million in lost wages, and $200 million in lost tax revenue in the nation as a whole. The focus of the Accenture report is on economic impacts

solely caused by freight transportation bottlenecks. The economic impacts of pedestrian and personal vehicle delays in crossing the border are not explicitly considered.

Some other studies analyze the San Diego County and Imperial County economic impacts of border delays for both personal trips and commercial traffic into southern California. HDR Decision Economics estimates that border crossing delays at ports of entry located in these two counties resulted in $3.9 billion in output losses and about 30,000 fewer jobs for the United States as a whole in 2008 (HDR, 2010). This report also presents estimates of economic impacts in Mexico. Another report by the same firm focuses only on the impacts of delays at ports of entry located in Imperial County, which experiences a lower volume of cross-border traffic than neighboring San Diego County. In 2012, delays at the Calexico (downtown) and Calexico East ports of entry in Imperial County are estimated to have resulted in $620 million in lost output and 4,844 lost jobs across the state of California with similar impacts occurring in Mexico (HDR, 2012).

A few studies of the economic impacts of border-crossing bottlenecks have been completed for El Paso and the neighboring Ciudad Juárez metropolitan economy in Mexico. A Colegio de la Frontera Norte (COLEF) study using 2007 data estimates the total economic impact of border crossing delays on Ciudad Juárez at $1.528 billion (Del Castillo-Vera et al., 2007; Del Castillo-Vera, 2009). That estimate is very close to the Accenture (2008) estimate of the El Paso port of entry delay impacts on the US economy. Delays at local border crossings are estimated to inflict approximately 87,600 job losses in Ciudad Juárez. The COLEF study also estimates the regional economic impacts of delays at other ports of entry in northern Mexico. Overall, the estimated impact of border delays on national economic output in Mexico is $7.5 billion with employment losses for the country as a whole totaling 296,400.

One report completed at the Texas Transportation Institute develops a tool for evaluating the direct costs of border crossing inefficiencies on shippers and carriers (Vadali et al., 2011). The practical application of this tool is then illustrated using data from the Bridge of the Americas (BOTA) in El Paso. In that study, a border crossing "delay" is defined with respect to the observed distribution of border crossing wait times. Only wait times above a defined threshold, such as the mean, the median, the 95th percentile, or similarly defined lower limit, are selected as constituting "delays." Another interesting feature of this study is that it calculates separate estimates of the impacts of delays for shippers of just-in-time (JIT) products versus those associated with other shippers and carriers. The adverse impacts are expected to be larger for the former group because JIT production lines are almost always affected when parts are not delivered on schedule as a consequence of border delays. Historical data indicate that JIT-related products represent about 78 percent of the cross-border freight traffic volume in the El Paso region. For above-average wait times (those exceeding 48 minutes), and given other default parameters, shippers of JIT products incur a direct cost of $11,748 per day. Table 1 shows that the total direct cost to all freight shippers (JIT plus non-JIT carriers and empty trucks) of delays at BOTA is estimated at $17,452 per day (Vadali et al., 2011). As a side-note, the mean wait time of 48 minutes reported in this study falls within the range of monthly mean wait times reported for trucks at the same bridge from July 2009 to March 2012 in another study: 40.2 to 64.3 minutes (Rajbhandari et al., 2012).

The Vadali et al. (2011) study discussed above only describes the direct economic costs of delays for a small subset of the firms involved in trans-border commerce. A study by Cambridge Systematics, Inc. attempts to provide a broader view of potential economic ramifications of extended wait times by examining both direct and indirect costs and evaluating the effects on multiple economic sectors (CS, 2011). In the preliminary analysis of cross-border economic linkages, the report estimates that approximately 115,000 jobs in El Paso, 19,000 jobs in Doña Ana County, New Mexico, and 559,000 jobs in the state of Chihuahua, Mexico, depend on cross-border commerce. In the case of El Paso, many of these jobs are in sectors like retail, manufacturing, freight shipping, warehousing, public accommodations, and various other sectors (legal, accounting, real estate, financial, etc.) that provide services to manufacturing and other firms with cross-border operations.

Table 1: Economic Costs of US-Mexico Border Crossing Delays

Location	Year	Economic Cost[a] (region of impact)	Job Losses (region of impact)	Source
United States (southern border)	2008	$5.8 billion (US) $1.7 billion (Texas)	26,000 (US) 8,500 (Texas)	Accenture
San Diego + Imperial Counties, CA	2008	$3.9 billion (US); $2.1 billion (MX)	30,363 (US); 10,849 (MX)	HDR Decision Economics
Imperial County, CA	2012	$620 million (CA); $755 million (MX)	4,844 (CA); 4,552 (MX)	HDR Decision Economics
Mexico (northern border)	2007	$1.5 billion (Juárez) $7.5 billion (MX total)	87,600 (Juárez) 296,400 (MX total)	Del Castillo-Vera et al. (2007)
El Paso, TX (Bridge of the Americas, BOTA)	2009	$17,452/day in direct costs to freight carriers	Not calculated	Vadali et al. (2011)
El Paso, TX/ Ciudad Juárez, MX	2035[b]	$12.4 bil. (El Paso); $39.8 bil. (Juárez); $1.1 bil. (Las Cruces)	144,617 (El Paso); 666,205 (Juárez); 12,801 (Las Cruces)	Cambridge Systematics, Inc.

[a] Economic costs are quantified as regional or national annual output losses except in Vadali et al. (2011), which quantifies daily direct costs to firms in one industry, and the multi-year costs reported by Cambridge Systematics.

[b] The Cambridge Systematics estimates in the last row assume no improvements in border crossing infrastructure or operations until 2035; the estimates presented only reflect costs of freight transportation delays.

Wait times for personal and commercial vehicles are projected to 2035 assuming no further improvements to the existing infrastructure and operations at the ports of entry (CS, 2011). Under this assumption, wait times for personal trips are expected to reach 15 hours by 2035 and those for commercial crossings are projected to reach 11 hours by that date. Delay-related economic costs are quantified separately for personal and commercial trips. Bottlenecks affecting the transit of commercial trucks impose the largest costs for the regional economy due to the reliance of the region's vibrant export-processing sector on cross-border access. Under the assumption of vastly extended wait times, regional employment is projected to shrink by 144,617 in El Paso, 666,205 in Ciudad Juárez, and 12,801 in Las Cruces by 2035 (Table 1). Furthermore, regional output is expected to decline by $12.38 billion in El Paso, $39.8 billion in Ciudad Juárez, and $1.06 billion in Las Cruces. Foregone work trips are expected to impose an additional region-wide cost of $1.4 billion and 27,396 lost jobs by 2035 if nothing is done to alleviate border bottlenecks. Cancelled shopping and recreation trips are estimated to reduce expenditure on consumer products and services in El Paso by another $1 billion (CS, 2011). The latter impact is comparatively small due partly to projected substitution of domestic shopping locations for foreign venues. Only the estimated costs of commercial vehicle delays are reported in Table 1 due to space constraints.

Estimated Benefits of Programs to Alleviate Bottlenecks

Several studies evaluate potential benefits associated with concrete proposals for reducing the length of wait times at the ports of entry. One such proposal is to increase staffing to keep open additional inspection booths. In peer-reviewed research supported by the US Department of Homeland Security, Roberts et al. (2014) estimate the impacts of additional customs officers on wait times, gross domestic product (GDP), and employment. The response of wait times to the number of open booths is quantified using a staffing experiment, which was conducted at the San Ysidro Port of Entry in July 2012. Two separate models are used to estimate the impacts of lower wait times on economic variables. The effects of lower wait times for 12 commercial vehicle ports of entry are estimated using a computable general equilibrium model. The impacts of reduced delays at 17 passenger vehicle ports on tourist and business spending are analyzed using an input-output approach. The results for passenger and freight ports are presented in separate rows of Table 2 and are summarized separately below.

The addition of one customs officer at each of the 17 passenger vehicle border crossings is expected to generate a total of $61.8 million in US GDP or $3.6 million per officer on average (in terms of 2011 dollars). The 17 additional customs officers would also generate 1,053 additional jobs or 62 jobs per officer (Roberts et al., 2014). The study points out that these impacts result from alleviating a bottleneck. Thus, it is not surprising that the 'multiplier' effect of adding customs officers at congested ports of entry is larger than the average effect of hiring additional employees at a typical business. The total value of time saved by reducing wait times is calculated at $27.2 million for all 17 ports. As shown in Table 3, the value of time saved for the El Paso ports is about $4 million. The reductions in wait times result in increased border crossings totaling 232,113 for El Paso (see Table 3). Most of the economic impacts of facilitating passenger vehicle traffic accrue to the region immediately adjacent to the port of entry. While details on the distribution of increased GDP and jobs by individual port of entry are not tabulated,

the largest net gain in US regional output ($7.6 million) occurs as a result of adding one more customs officer at the Bridge of the Americas in El Paso (Roberts et al., 2014).

The same study also estimates the effects of adding customs officers at 12 land freight ports of entry during peak demand periods. Overall, the additional staffing is projected to reduce total truck transportation costs by $11.67 million. The estimated reduction in annual truck transportation costs due to one additional officer at the Ysleta Port of Entry is approximately $370,000 while the estimated cost reduction at Bridge of the Americas is $390,000. Long delays in crossing the border impose opportunity costs in terms of time that could be spent in more productive activities in addition to the direct 'out-of-pocket' costs for truck operation and maintenance. The reduction in opportunity costs induced by an additional inspection officer is valued at $900,000 for the Ysleta Port of Entry and $950,000 for the Bridge of the Americas. The overall impacts of 12 additional customs officers on US GDP is estimated at $3 million as shown in Table 2. The overall increase in Mexican GDP (not shown in Table 2) is estimated at $4.8 million. That figure includes an additional $391,000 stemming from one more inspection officer at the Ysleta Port of Entry and an additional $515,000 owing to increased staffing at the Bridge of the Americas. When US and Mexican GDP gains are summed, the additional staffing is expected to increase bi-national output by $495,000 per officer at Ysleta and $640,000 per officer at the Bridge of the Americas.

Another peer-reviewed article using a very similar empirical estimation strategy finds somewhat larger impacts of additional staffing at land freight ports of entry on US GDP and job growth (Avetisyan et al., 2015). It reports an aggregate net impact on US GDP of $4.192 million per year (in 2011 dollars). This includes increased output of $166,000 owing to the opening of one additional inspection booth at the Ysleta Port of Entry and $218,000 stemming from one more open booth at the Bridge of the Americas. Projected increases in Mexico's GDP attributed to staffing changes at these two ports of entry are similar to those for the US. The reduced wait times are also projected to increase the volume of cross-border trade. It is important to note that the

Table 2: Economic Benefits of Additional Customs Officers

Location	Base Year	Policy Change	Output Gains [a] (region/port)	Job Gains [a] (region/port)	Source
US & Canadian borders	2012	+17 officers at passenger ports	$61.8 mil. (US); $7.6 mil. (BOTA)	1,053 (US)	Roberts et al. (2014)
US & Canadian borders	2012	+12 officers at freight ports	$3.0 mil. (US); $104,000 (Ysleta); $125,000 (BOTA)	31 (US); 1 (Ysleta); 1 (BOTA)	Roberts et al. (2014)
US & Canadian borders	2012	+12 officers at freight ports	$4.2 mil. (US); $166,000 (Ysleta) $218,000 (BOTA)	43 (US); 2 (Ysleta); 2 (BOTA)	Avetisyan et al. (2015)
El Paso, TX/ Cd. Juárez, MX	2035	Fully staff all booths in peak demand periods	$30 million (El Paso region)	841 (El Paso region)	Cambridge Systematic, Inc.

[a] For the Roberts and Avetisyan papers, only US output and job gains are reported. The Cambridge Systematics report does not distinguish between US and Mexican output and job gains.

Table 3: Impacts of Additional Customs Officers on El Paso Passenger Vehicle Crossings [a]

Port of Entry	Change in the Monetary Value of Time Waited by Passengers in Millions of 2011 Dollars			Long-run cross-border trip – wait time elasticity	Number of new trips (increment over 2012 level)		
	US Residents	Mexican Residents	Total		US Residents	Mexican Residents	Total
Ysleta	$0.9	$0.2	$1.1	-0.35	29,953	32,456	62,409
Paso del Norte	$1.0	$0.2	$1.2	-0.38	32,079	34,761	66,840
BOTA	$1.4	$0.3	$1.8	-0.44	49,369	53,495	102,864
Total	$3.3	$0.7	$4.0	-	111,401	120,712	232,113

[a] Adapted from Table 2 in Roberts et al. (2014). Some totals do not match the sum of components due to rounding error.

economic impacts estimated by both Roberts et al. (2014) and Avetisyan et al. (2015) do not take into account some of the potential indirect benefits of alleviating border bottlenecks. In particular, these studies do not seek to estimate the gains that might accrue to JIT manufacturers and other firms engaged in cross-border trade if lower wait times reduce the need to carry larger-than-desirable inventories as buffers against the risk that cross-border shipments will not arrive on time.

The last row in Table 2, corresponding to the Cambridge Systematics (CS, 2011) estimates, shows the projected economic impact of fully staffing front line officers at all existing booths at all border crossings in El Paso during periods of high demand. This hypothetical staffing increase scenario is similar to those appraised in the other studies. However, unlike the scenarios contemplated in other studies in Table 2, this one does not specify the exact number of additional inspection booths to be opened. Also, the estimated impact is presented as a change relative to projected baseline economic impacts in 2035 (which are quite large as shown in Table 1), rather than relative to actual conditions in 2012 as is the case for Roberts et al. (2014) and Avetisyan et al. (2015). Furthermore, the Cambridge Systematics estimates shown in Table 2 are for the region including El Paso, Las Cruces, and Ciudad Juárez, whereas the other estimates in the table exclude Mexico. Thus, it is difficult to directly compare the estimated $30 million increase in regional output with the other estimates in the table. However, like the other estimates, the Cambridge Systematics projection suggests that adding customs officers at the ports of entry would yield substantial economic benefits by alleviating bottlenecks at the ports of entry.

Conclusion

Numerous studies show that the El Paso economy is closely linked to that of neighboring Ciudad Juárez, Mexico, in a complex variety of ways. Bottlenecks at the ports of entry take a toll on the regional economy by posing obstacles to activities such as cross-border shopping, timely delivery of cargo, and the performance of general business obligations for firms with cross-border operations. The studies reported in Table 1 clearly indicate that the economic costs of border-crossing delays are sizable for the United States as a whole, as well as for border region economies like El Paso. One of the proposals for reducing these adverse economic impacts involves increasing staffing levels at ports of entry. The estimates in Table 2 show that even relatively small increases in the number of open inspection booths during peak demand periods can help alleviate congestion and lead to substantial economic benefits.

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Executive Overview

Recent developments generally point to economic expansion in the Borderplex economy. The unemployment rate in El Paso moved below the 6 percent mark on a sustained basis in 2016 for the first time since 1973. Formal sector employment in Ciudad Juárez grew to more than 426.3 thousand for the time ever, while in Chihuahua City it jumped to greater than 246.0 thousand. Although the labor market is still somewhat lethargic in Las Cruces, conditions improved sufficiently for total employment to exceed 96.0 thousand for the first time ever in the greater Mesilla Valley. Despite these reassuring signs, downside risks, visible mainly at the national and global levels suggest that the possibility of a derailment of regional growth is somewhat more serious than usual.

El Paso Demographics

Relatively robust population growth is expected during the forecast period (Table 2). By 2018, El Paso County is predicted to have nearly 874 thousand residents and 285 thousand households. Underlying the projected uptick in population growth is a return to positive net migration driven by low unemployment rates in El Paso and reduced labor demand in many oil-producing areas. Net domestic out-migration, which is expected to slow to a trickle by 2018, is more than offset by a steady influx of migrants from abroad. The combination of demographic expansion and generally favorable economic conditions causes the number of registered vehicles to rise above 700 thousand by 2018. Steady growth is also projected

for the number of businesses operating in El Paso. After declining for several consecutive years, business and personal bankruptcies are projected to bottom out by 2017 and then rise slightly in 2018 as a result of expected increases in borrowing volumes and higher interest rates on loans. Population growth is further predicted to raise local college enrollments.

Employment & the El Paso Labor Market

Due to increased workforce participation rates and positive predicted net migration, the rate of growth in the civilian labor force is forecast to accelerate in 2017 and 2018, slightly exceeding the pace of growth in civilian employment (Table 3). As a consequence, the local unemployment rate is projected to edge slightly upward after falling to historical lows. Total employment is forecast to surpass 446 thousand by 2018. Sectors with relatively rapid projected employment growth rates include construction, finance and real estate, hotels and food services, and healthcare. Public sector civilian employment is predicted to gradually recover after several years of government payroll reductions. However, troop strength at Fort Bliss is expected to continue to decline through the end of forecast period.

El Paso Personal Income

El Paso personal income is expected to increase gradually through 2018 (Table 4). The rate of inflation is predicted to accelerate throughout the forecast period and this affects the personal income projections, which are expressed in nominal terms. Relatively strong employment growth in the early part of the forecast period contributes to solid growth in wage and salary disbursements. After declining for several years in the wake of the Great Recession, proprietor incomes are expected to continue a multi-year recovery. Increases in the absolute value of negative residence adjustments reflect the role of El Paso as a regional hub economy that attracts commuters from the surrounding area. Dividend and interest income, as well as retirement

transfers, increase substantially in the latter part of the forecast period due to anticipated higher returns on financial investments. Income maintenance transfers increase primarily due to demographic expansion. Unemployment transfers are projected to decline at first and then rise slightly. The return of the latter variables to slow growth patterns reflects completion of the recovery phase of the most recent business cycle by the local economy.

Retail Sales in El Paso

The dollar value of retail sales sagged in 2015, primarily due to lower gasoline station sales (Table 5). The impact of lower motor fuel prices extends into 2016. However, a projected rebound in gasoline prices, along with consumer price inflation more generally, contributes to higher rates of growth in the value of retail sales in 2017 and 2018. Recent improvements in the local housing market reverberate through the retail sector by raising projected sales of building and garden supplies, home furnishings, and appliances. A robust healthcare sector is predicted to boost sales by health and personal care stores. Other sectors that are forecast to do relatively well in 2017 and 2018 include food and beverage establishments and, as already noted, gasoline stations. A number of commercial sectors are set to benefit from the ongoing expansion of formal sector payrolls in Ciudad Juárez through increased cross-border shopping, even though this effect is attenuated to some extent by the depreciation of the peso.

El Paso Residential Construction & Real Estate

Generally stable conditions are expected to prevail in the local housing market (Table 6). Projected increases in net migration should help bolster the number of housing starts, although this may be somewhat offset during the latter part of the forecast period by increases in borrowing costs. Following a recent growth spurt, apartment construction is expected to decline slightly and then level off at around 800 units per year through 2018. The median price of existing stand-alone housing units is predicted to reach $144 thousand, while the price of newly constructed units is projected to rise above $163 thousand in Table 6. Average monthly mortgage payments are forecast to increase substantially above current levels, rising to $649 per month by 2018. As a consequence, housing

affordability will erode. Sales of existing housing units are projected to spike at the beginning of the forecast period and to decrease thereafter in response to somewhat reduced affordability.

El Paso Nonresidential Construction & Apartment Rents

A recent boom in nonresidential construction is predicted to gradually subside over the course of the simulation period (Table 7). Nonetheless, the value of new office space and other commercial space construction is forecast to remain well above historical average levels through 2018 due to downtown revitalization projects as well as development of new shopping areas and office space in other parts of El Paso. Large increases in the supply of multi-family housing units are predicted to result in relatively slow growth in apartment rents. As a consequence, the median monthly rent for a one-bedroom apartment should not surpass $700 prior to 2018.

El Paso Air Transportation

Passenger arrivals and departures at El Paso International Airport (EPIA) are predicted to level off during the forecast period after generally declining in response to seating capacity shifts implemented after 2007 (Table 8). Among the factors helping to maintain passenger counts near current levels are increased opportunities for travel afforded by improved economic conditions and relatively low air fares. Efforts to increase the number of available flights, if successful, may also help prevent further losses in passenger traffic through the airport. The volume of airborne cargo traffic is also expected to stabilize near the levels recorded during the previous three years. Vigorous growth in cross-border manufacturing and the consequent demand for production input deliveries are likely to help buoy freight shipments through EPIA.

International Bridge Traffic

The volume of cross-border traffic is expected to continue rising, with growth in pedestrian and personal vehicle traffic tailing off slightly towards the end of the forecast period (Table 9). Recent increases in the purchasing power of the dollar relative to the

peso may entice additional US residents to cross the border for shopping, recreational, and health-related trips. Expansion in export-oriented manufacturing employment in Ciudad Juárez is another factor that contributes to the number of cross-border trips. However, the pace of job growth across the border is projected to decelerate considerably in coming years and this is likely to slow the rate of growth in passenger and pedestrian border crossings. After recovering from disruptions caused by the partial closure of Ysleta Zaragoza Bridge in 2015, cargo vehicle traffic is predicted to increase very gradually. Once operations stabilize on both sides of the Tornillo-Guadalupe Bridge, a small portion of cross-border traffic may be diverted away from the bridges that directly link El Paso with Ciudad Juárez.

El Paso Hotel Activity

A number of major hotel construction and renovation projects are planned for El Paso at the time of this writing. The total number of hotels in operation is projected to rise to 83 by the end of the forecast period (Table 10). The forecast predicts a corresponding increase in total hotel capacity, as measured by room nights available. The demand for hotel accommodation, as measured by room nights sold, is forecast to increase at a slightly faster pace, resulting in a gradual rise in the hotel occupancy rate. Higher demand is expected as a consequence of increased travel to El Paso for work purposes and for leisure activities. The price of a hotel stay in El Paso has increased faster than the rate of inflation in recent years, but growth in prices is expected to subside somewhat in 2017 and 2018. A similar pattern is projected for total hotel revenues.

El Paso Water Consumption

A recent revival of construction activity likely portends future increases in the number of water accounts (Table 11). In particular, multi-family residential and commercial business water connections are predicted to expand more rapidly during the forecast period relative to the previous five years. The account category that is predicted to expand at the quickest pace is public sector, not-for-profit, and miscellaneous water hookups. Recent increases in the price of water, along with continuing improvements in the efficiency of water-using home appliances, contribute to declining overall water consumption through 2016. However, further reductions in aggregate water consumption are not projected for 2017 or 2018. That largely results from growth in the customer base offsetting the effects of declining per capita water usage.

Ciudad Juárez Economic Activity

According to official estimates, the population of Ciudad Juárez in 2015 was 1.39 million, implying that the city grew by only 0.6 percent per year, on average, over the previous decade. That is in sharp contrast to an average annual growth rate of 2.6 percent between 1995 and 2005. Population growth is expected to revive as employment expands the city continues to reverse the security-related out-migration flows of prior years (Table 12). The number of resident deaths is projected to decline slightly in 2017 after rising this year due to an uptick in the violent crime rate. Steady expansion of the municipal water system, growth in the number of registered vehicles, and higher college enrollments are expected as consequences of projected net in-migration and generally favorable economic conditions. After a few years of very rapid growth, the rate of increase in formal-sector employment is projected to slow substantially over the course of the forecast period (Table 13). This is due primarily to export-processing IMMEX manufacturing employment stabilization at slightly less than 270 thousand by the end of 2018. While dollar-denominated wages of IMMEX employees have fallen due to the depreciation of the peso, this trend is likely to be gradually reversed in coming years. Given relatively low electricity prices, growth in the manufacturing sector, and positive net migration, steady growth is predicted for total electricity demand and the size of the electricity grid.

Chihuahua City Economic Activity

Like Ciudad Juárez, improved employment prospects are also expected to spur net in-migration into Chihuahua City (Table 14). Population in the state capital is expected to surpass 900 thousand by 2017. Vehicle registrations, enrollment at local colleges, and the size of the local water system are all projected to trend upwards over the forecast period. Changes in manufacturing employment are predicted to be the main driving force behind changes

in total employment through 2018 (Table 15). Total manufacturing employment is predicted to top the 100 thousand mark by the end of the simulation period. Robust demographic expansion should also help fuel job growth in commerce and other services. IMMEX employment and plants are projected to increase, though at a decreasing rate, through 2018. Solid growth in electricity consumption and the number of electricity meters is driven by metropolitan economic and demographic expansion, among other factors.

Las Cruces Economic Conditions

Following several years of demographic stagnation, Las Cruces is projected to experience modest population gains through 2018 (Table 16). The rate of business formation is also expected to strengthen gradually over the forecast period. Business and personal bankruptcies are expected to bottom out by 2017. Efforts by colleges in the Mesilla Valley to boost enrollments, which have fallen substantially below 2010/2011 levels, are expected to begin paying off by 2017. Real gross metropolitan product is forecast to rise incrementally, but at rates well below those seen prior to the Great Recession. A similar pattern is projected for Las Cruces area total employment (Table 17). Sectors with strong job growth prospects include construction, finance and real estate, hotels and food services, healthcare, and call centers. State and federal government jobs are expected to begin a slow rebound by 2017 and local government jobs are predicted to grow at a very moderate pace. Growth in personal income is expected to accelerate throughout the forecast period, partly as a consequence of increasing rates of inflation and also as a result of gradual improvement in economic conditions (Table 18). Interest and retirement incomes are expected to increase in tandem with national interest rates. Owing to both demographic growth and the completion of the expansionary phase of the local business cycle, income maintenance payments are expected to rise gradually and unemployment transfers are predicted to bottom out by 2017 and then increase slightly. Residence adjustment figures reflect substantial downward revisions in the historical data. Overall, Las Cruces area personal income should surpass 7.5 billion per year by 2018.

Forecast Risks

Economic slowdowns in various emerging markets continue to represent important risks to the economic health of the United States. Rising household and corporate debt levels pose further risks. Another element of uncertainty regards the future trajectory of energy prices and price levels more generally. Rapid inflation would likely result in higher interest rates, after many years of exceptionally low rates, and this could adversely affect business investment. Political risks to global economic cooperation have also become more visible and could have especially onerous consequences for the trade-dependent US-Mexico border region. In the case of Mexico, a prolonged slump in oil prices or a continued depreciation of the peso might also increase the probability of a recession. The large array of downside risks facing the United States, Mexico, and the border region result in a greater-than-usual possibility that the forecasts presented in this report could prove overly optimistic.

Historical and Forecast Data

Tables 1 through 18 summarize the numerical results from the short-term forecast simulation to 2018 using the UTEP Borderplex Econometric Forecasting Model. Forecasts for El Paso and Las Cruces income and employment begin in 2015. Forecasts for all other data series begin in 2016. At present, the model is comprised by 250 equations covering all of the categories listed in the tables. Suggestions and requests for upcoming volumes are welcome. Please send them to Border Region Modeling Project - CBA 236, UTEP Department of Economics & Finance, 500 West University, El Paso, TX 79968-0543.

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Las Cruces Personal Income

Table 1: Major Indicators

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
El Paso Population	769.930	786.759	803.627	819.726	831.144	831.324	833.487	836.575	849.126	861.653	873.980
% change	1.9	2.2	2.1	2.0	1.4	0.0	0.3	0.4	1.5	1.5	1.4
El Paso Net Migration	4.822	7.342	7.642	7.056	2.294	-8.545	-6.220	-5.140	4.329	4.350	4.207
El Paso Natural Increase	9.530	9.487	9.226	9.043	9.124	8.725	8.383	8.228	8.222	8.177	8.120
El Paso Automobile Registrations	567.693	570.744	589.193	597.092	615.285	626.930	641.825	657.944	670.582	687.003	703.641
% change	-1.3	0.5	3.2	1.3	3.0	1.9	2.4	2.5	1.9	2.4	2.4
El Paso Personal Income	21208.2	21893.6	23197.9	24539.3	25767.3	25607.5	26518.5	27247.2	28190.8	29399.8	30761.3
% change	6.2	3.2	6.0	5.8	5.0	-0.6	3.6	2.7	3.5	4.3	4.6
El Paso Total Employment	382.446	382.982	388.676	401.785	405.221	409.773	414.194	422.902	432.001	439.518	446.532
% change	3.1	0.1	1.5	3.4	0.9	1.1	1.1	2.1	2.2	1.7	1.6
El Paso Unemployment Rate	6.3	9.0	9.5	10.3	9.3	8.8	6.5	5.2	4.8	4.9	5.1
El Paso Gross Metropolitan Product	24.479	24.464	24.758	24.851	25.355	25.848	26.026	26.467	27.027	27.547	27.926
% change	-5.0	-0.1	1.2	0.4	2.0	1.9	0.7	1.7	2.1	1.9	1.4
El Paso Commercial Activity	9476.7	8629.0	9474.9	10106.0	10624.1	11007.8	11442.1	11484.4	11679.3	12224.0	12712.7
% change	3.0	-8.9	9.8	6.7	5.1	3.6	3.9	0.4	1.7	4.7	4.0
El Paso Per Capita Personal Income	27.546	27.828	28.867	29.936	31.002	30.803	31.816	32.570	33.200	34.120	35.197
USA Per Capita Personal Income	40.998	39.322	40.235	42.419	44.204	44.362	45.996	47.660	49.080	51.014	53.170
Ciudad Juarez Total Employment	322.737	302.365	312.920	313.994	335.806	345.732	376.040	408.607	426.322	436.450	443.649
% change	-13.3	-6.3	3.5	0.3	6.9	3.0	8.8	8.7	4.3	2.4	1.6
Chihuahua City Total Employment	175.573	176.277	188.172	197.584	214.381	218.408	223.640	235.534	246.056	252.294	257.192
% change	-3.5	0.4	6.7	5.0	8.5	1.9	2.4	5.3	4.5	2.5	1.9
Las Cruces Total Employment	91.583	90.645	90.929	92.322	92.097	93.671	94.333	94.701	96.026	97.359	98.771
% change	1.7	-1.0	0.3	1.5	-0.2	1.7	0.7	0.4	1.4	1.4	1.5

Notes:

1. All demographic, vehicle registration, and employment data are in thousands.

2. Total personal income and commercial activity data are reported in millions of dollars.

3. Per capita personal income data are in thousands of dollars.

4. El Paso unemployment rate data are reported in annual average percentages.

5. El Paso real gross metropolitan product is reported in billions of 2009 dollars.

Table 2: El Paso Demographics

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Population	769.930	786.759	803.627	819.726	831.144	831.324	833.487	836.575	849.126	861.653	873.980
% change	1.9	2.2	2.1	2.0	1.4	0.0	0.3	0.4	1.5	1.5	1.4
Resident Births	14.054	13.968	13.792	13.892	13.873	13.569	13.567	13.524	13.506	13.483	13.461
% change	-1.8	-0.6	-1.3	0.7	-0.1	-2.2	0.0	-0.3	-0.1	-0.2	-0.2
Resident Deaths	4.524	4.481	4.566	4.849	4.749	4.844	5.184	5.296	5.284	5.306	5.341
% change	4.4	-1.0	1.9	6.2	-2.1	2.0	7.0	2.2	-0.2	0.4	0.7
Net Migration	4.822	7.342	7.642	7.056	2.294	-8.545	-6.220	-5.140	4.329	4.350	4.207
Domestic Migration	-2.707	-0.511	-0.222	5.330	-0.685	-11.423	-8.458	-11.854	-1.310	-0.505	-0.269
International Migration	7.529	7.853	7.864	1.726	2.979	2.878	2.238	6.714	5.638	4.855	4.476
Households	247.202	252.730	259.642	266.087	269.537	269.572	269.808	272.783	276.320	280.850	285.074
% change	2.6	2.2	2.7	2.5	1.3	0.0	0.1	1.1	1.3	1.6	1.5
Automobile Registrations	567.693	570.744	589.193	597.092	615.285	626.930	641.825	657.944	670.582	687.003	703.641
% change	-1.3	0.5	3.2	1.3	3.0	1.9	2.4	2.5	1.9	2.4	2.4
Civilian Labor Force	388.055	397.973	403.348	417.647	413.782	417.755	412.828	417.160	424.862	433.626	442.085
% change	3.0	2.6	1.4	3.5	-0.9	1.0	-1.2	1.0	1.8	2.1	2.0
Business Establishments	13.273	13.179	13.356	13.494	13.745	13.814	13.875	13.957	14.143	14.355	14.494
% change	0.4	-0.7	1.3	1.0	1.9	0.5	0.4	0.6	1.3	1.5	1.0
Commercial Sector Estabs.	9.362	9.786	10.068	10.262	10.271	10.302	10.306	10.396	10.547	10.718	10.802
% change	-3.5	4.5	2.9	1.9	0.1	0.3	0.0	0.9	1.5	1.6	0.8
Business Bankruptcies	84	108	104	105	89	82	68	57	54	53	55
% change	37.7	28.6	-3.7	1.0	-15.2	-7.9	-17.1	-16.2	-5.3	-1.9	3.8
Personal Bankruptcies	2129	2814	2645	2462	2389	2111	2036	1984	1928	1922	1942
% change	33.4	32.2	-6.0	-6.9	-3.0	-11.6	-3.6	-2.6	-2.8	-0.3	1.0
UTEP Fall Enrollment	20.458	21.011	22.106	22.640	22.749	23.003	23.079	23.397	23.922	24.345	24.700
% change	1.5	2.7	5.2	2.4	0.5	1.1	0.3	1.4	2.2	1.8	1.5
EPCC Fall Enrollment	24.536	27.415	29.463	30.475	30.227	28.570	27.862	28.411	29.161	29.646	30.231
% change	-2.1	11.7	7.5	3.4	-0.8	-5.5	-2.5	2.0	2.6	1.7	2.0

Notes:

1. Business and personal bankruptcy data reported in actual units.

2. All other data are reported in thousands.

Table 3: El Paso Labor Force & Employment

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Civilian Labor Force	388.055	397.973	403.348	417.647	413.782	417.755	412.828	417.160	424.862	433.626	442.085
% change	3.0	2.6	1.4	3.5	-0.9	1.0	-1.2	1.0	1.8	2.1	2.0
Unemployment Rate	6.3	9.0	9.5	10.3	9.3	8.8	6.5	5.2	4.8	4.9	5.1
Total Employment	382.446	382.982	388.676	401.785	405.221	409.773	414.194	422.902	432.001	439.518	446.532
% change	3.1	0.1	1.5	3.4	0.9	1.1	1.1	2.1	2.2	1.7	1.6
Manufacturing	21.278	19.157	18.155	19.350	19.663	20.054	19.251	19.057	18.748	18.338	17.845
% change	-5.2	-10.0	-5.2	6.6	1.6	2.0	-4.0	-1.0	-1.6	-2.2	-2.7
El Paso Construction	26.650	26.385	25.897	24.874	23.636	23.617	24.131	24.693	25.890	26.894	27.478
% change	7.3	-1.0	-1.8	-4.0	-5.0	-0.1	2.2	2.3	4.8	3.9	2.2
Transportation & Warehousing	18.698	17.826	17.470	17.783	18.372	18.425	18.773	18.969	19.397	19.744	20.005
% change	0.8	-4.7	-2.0	1.8	3.3	0.3	1.9	1.0	2.3	1.8	1.3
Finance, Insurance & Real Estate	27.095	28.609	28.603	30.500	30.492	30.850	30.374	30.758	31.859	32.582	33.478
% change	4.3	5.6	0.0	6.6	0.0	1.2	-1.5	1.3	3.6	2.3	2.7
Retail Trade Employment	43.972	42.110	42.321	43.507	44.166	45.411	46.982	47.404	48.653	49.750	50.611
% change	0.7	-4.2	0.5	2.8	1.5	2.8	3.5	0.9	2.6	2.3	1.7
Hotels & Food Services	28.396	28.096	29.069	30.665	31.209	31.995	33.278	34.411	35.910	37.095	38.420
% change	4.4	-1.1	3.5	5.5	1.8	2.5	4.0	3.4	4.4	3.3	3.6
Healthcare & Social Services	35.240	37.124	38.152	39.808	40.738	41.618	43.005	44.606	46.091	47.476	48.657
% change	2.0	5.3	2.8	4.3	2.3	2.2	3.3	3.7	3.3	3.0	2.5
Professional & Technical Services	14.296	13.599	13.918	14.093	14.101	14.300	14.139	14.340	14.460	14.602	14.791
% change	3.6	-4.9	2.3	1.3	0.1	1.4	-1.1	1.4	0.8	1.0	1.3
Temporary Help & Call Centers	30.960	31.696	31.935	31.763	29.469	29.788	30.732	31.875	32.600	33.138	33.823
% change	9.1	2.4	0.8	-0.5	-7.2	1.1	3.2	3.7	2.3	1.7	2.1
Local Government	44.249	44.757	45.199	45.107	44.880	45.263	45.152	45.248	45.455	45.482	45.726
% change	1.4	1.1	1.0	-0.2	-0.5	0.9	-0.2	0.2	0.5	0.1	0.5
State Government	8.325	8.837	9.422	9.472	10.083	9.713	8.827	8.801	8.837	8.901	8.995
% change	-1.4	6.2	6.6	0.5	6.5	-3.7	-9.1	-0.3	0.4	0.7	1.1
Federal Civilian Govt.	10.842	11.677	12.542	12.869	13.099	12.824	12.497	12.453	12.495	12.606	12.627
% change	6.1	7.7	7.4	2.6	1.8	-2.1	-2.5	-0.4	0.3	0.9	0.2
Military Employment	18.709	20.926	23.713	27.225	29.921	28.920	28.234	27.539	27.440	27.343	27.203
% change	15.1	11.8	13.3	14.8	9.9	-3.3	-2.4	-2.5	-0.4	-0.4	-0.5
Not Elsewhere Classified	53.736	52.183	52.280	54.769	55.392	56.995	58.819	62.748	64.168	65.568	66.874
% change	1.3	-2.9	0.2	4.8	1.1	2.9	3.2	6.7	2.3	2.2	2.0

Notes:

1. Labor force and employment data are in thousands; unemployment rate data are in percentages.

2. Not Elsewhere Classified includes communications, arts and entertainment, private education and wholesale trade.

Table 4: El Paso Personal Income

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Personal Income	21208.2	21893.6	23197.9	24539.3	25767.3	25607.5	26518.5	27247.2	28190.8	29399.8	30761.3
% change	6.2	3.2	6.0	5.8	5.0	-0.6	3.6	2.7	3.5	4.3	4.6
Wages and Salaries	10243.3	10443.4	10964.8	11525.0	12085.0	12182.8	12596.4	13035.3	13538.2	14039.9	14603.3
% change	5.0	2.0	5.0	5.1	4.9	0.8	3.4	3.5	3.9	3.7	4.0
Other Labor Income	1912.2	2079.1	2286.2	2397.8	2569.6	2613.0	2628.9	2715.0	2827.8	2957.5	3104.2
% change	3.4	8.7	10.0	4.9	7.2	1.7	0.6	3.3	4.2	4.6	5.0
Proprietor Incomes	2650.1	2570.3	2550.3	2499.7	2488.8	2460.0	2639.3	2734.3	2846.4	2985.5	3113.4
% change	-2.5	-3.0	-0.8	-2.0	-0.4	-1.2	7.3	3.6	4.1	4.9	4.3
Social Ins. Contributions	769.3	811.3	836.4	684.3	704.9	909.5	946.5	978.7	1017.8	1055.3	1096.4
% change	3.2	5.5	3.1	-18.2	3.0	29.0	4.1	3.4	4.0	3.7	3.9
Residence Adjustments	-306.3	-342.3	-350.9	-359.7	-397.0	-368.4	-381.8	-399.8	-408.0	-413.5	-418.5
% change	-13.8	11.7	2.5	2.5	10.4	-7.2	3.6	4.7	2.1	1.3	1.2
Dividends, Int., Rent	3089.5	3103.3	3165.7	3541.4	4154.6	3891.9	4009.4	4111.8	4206.6	4346.9	4581.8
% change	7.7	0.4	2.0	11.9	17.3	-6.3	3.0	2.6	2.3	3.3	5.4
Retirement Transfers	3532.1	3742.0	4182.5	4380.0	4351.7	4551.4	4850.8	4922.1	5092.4	5422.6	5732.4
% change	13.8	5.9	11.8	4.7	-0.6	4.6	6.6	1.5	3.5	6.5	5.7
Inc. Maint. Transfers	786.4	914.5	1000.3	1029.8	1037.3	1043.5	1033.2	1030.2	1033.5	1047.6	1072.0
% change	7.6	16.3	9.4	2.9	0.7	0.6	-1.0	-0.3	0.3	1.4	2.3
Unemployment Transfers	70.2	194.6	235.3	209.6	182.1	142.8	88.8	77.0	71.8	68.5	69.2
% change	46.3	177.2	21.0	-10.9	-13.1	-21.6	-37.8	-13.2	-6.8	-4.6	1.0

Notes:

1. All income data are expressed in millions of dollars.

2. Social insurance contributions are deducted from total regional income estimates.

3. Retirement transfer payments include social security and other retirement payments.

4. Income maintenance transfers include temporary assistance for needy families and other payments.

5. Unemployment transfer payments include unemployment insurance payments to individuals.

Table 5: El Paso Gross Commercial Activity

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	9476.7	8629.0	9474.9	10106.0	10624.1	11007.8	11442.1	11484.4	11679.3	12224.0	12712.7
% change	3.0	-8.9	9.8	6.7	5.1	3.6	3.9	0.4	1.7	4.7	4.0
Motor Vehicles & Parts	1321.9	1098.1	1289.8	1489.1	1641.2	1901.5	1936.0	1979.3	2037.8	2111.9	2185.6
% change	-11.1	-16.9	17.5	15.4	10.2	15.9	1.8	2.2	3.0	3.6	3.5
Furniture & Home Furnishings	198.0	166.3	187.2	185.0	188.4	212.4	232.4	250.8	259.7	268.7	276.7
% change	-3.5	-16.0	12.6	-1.2	1.9	12.7	9.4	8.0	3.5	3.5	3.0
Electronics & Appliances	317.5	285.3	298.6	286.2	282.9	267.2	250.3	322.9	318.0	329.6	345.7
% change	3.2	-10.1	4.6	-4.1	-1.2	-5.6	-6.3	29.0	-1.5	3.6	4.9
Building & Garden Supplies	502.8	465.4	505.0	506.6	520.1	534.5	533.3	553.3	580.7	603.3	630.1
% change	-4.2	-7.4	8.5	0.3	2.7	2.8	-0.2	3.7	5.0	3.9	4.4
Food & Beverage Stores	834.1	877.9	925.6	982.3	928.1	929.4	955.4	954.3	982.4	1014.2	1045.4
% change	8.9	5.3	5.4	6.1	-5.5	0.1	2.8	-0.1	2.9	3.2	3.1
Health & Personal Care	439.5	471.5	487.2	512.5	499.4	515.5	569.6	577.8	597.9	620.1	644.1
% change	3.8	7.3	3.3	5.2	-2.6	3.2	10.5	1.4	3.5	3.7	3.9
Gasoline Stations	1195.5	888.4	1073.0	1245.5	1403.2	1352.0	1430.3	1123.3	1016.4	1191.0	1269.2
% change	7.2	-25.7	20.8	16.1	12.7	-3.7	5.8	-21.5	-9.5	17.2	6.6
Clothing & Accessories	607.4	545.5	645.3	612.2	644.0	680.0	692.1	701.9	714.4	734.7	757.2
% change	2.4	-10.2	18.3	-5.1	5.2	5.6	1.8	1.4	1.8	2.8	3.1
Sporting Goods, Books & Music	201.9	196.0	192.5	192.7	211.5	215.2	219.5	218.6	224.5	230.6	237.5
% change	6.5	-2.9	-1.8	0.1	9.7	1.8	2.0	-0.4	2.7	2.7	3.0
Gen. Merch. & Warehouse Clubs	2164.0	2095.1	2215.3	2358.9	2455.9	2528.1	2621.1	2642.7	2712.5	2803.3	2903.9
% change	3.2	-3.2	5.7	6.5	4.1	2.9	3.7	0.8	2.6	3.3	3.6
Florist, Gift, Pet & Miscellaneous	655.3	489.2	508.7	499.4	508.1	506.8	512.8	595.9	602.0	607.5	626.1
% change	24.9	-25.3	4.0	-1.8	1.8	-0.3	1.2	16.2	1.0	0.9	3.1
Nonstore Retailers	76.6	58.5	62.8	102.5	118.6	133.9	163.3	131.3	147.9	161.5	175.1
% change	-0.8	-23.6	7.3	63.4	15.7	12.9	22.0	-19.6	12.6	9.2	8.4
Food & Beverage Establishments	962.6	991.8	1083.9	1133.0	1222.7	1231.3	1326.1	1432.2	1485.0	1547.5	1615.9
% change	7.8	3.0	9.3	4.5	7.9	0.7	7.7	8.0	3.7	4.2	4.4

Notes:

1. All sales figures are expressed in millions of dollars.

2. All data correspond to the North American Industrial Classification System (NAICS).

Table 6: El Paso Residential Construction & Real Estate

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Housing Starts	3.732	2.997	4.144	4.046	4.054	3.704	2.841	3.693	3.785	3.942	3.989
% change	-20.5	-19.7	38.3	-2.4	0.2	-8.6	-23.3	30.0	2.5	4.2	1.2
Single-Family Starts	2.885	2.610	2.970	3.223	3.197	2.588	2.278	2.644	2.954	3.073	3.109
% change	-26.7	-9.5	13.8	8.5	-0.8	-19.0	-12.0	16.1	11.7	4.0	1.2
Multi-Family Starts	0.847	0.387	1.174	0.823	0.857	1.116	0.563	1.049	0.831	0.869	0.880
% change	12.2	-54.3	203.4	-29.9	4.1	30.2	-49.6	86.3	-20.8	4.6	1.3
Total Housing Stock	257.274	260.975	268.258	274.801	278.935	282.858	286.754	290.021	293.668	297.421	301.250
% change	1.5	1.4	2.8	2.4	1.5	1.4	1.4	1.1	1.3	1.3	1.3
Single-Family Stock	180.779	184.206	190.129	194.164	196.696	199.650	202.579	205.002	207.752	210.736	213.855
% change	1.8	1.9	3.2	2.1	1.3	1.5	1.5	1.2	1.3	1.4	1.5
Multi-Family Stock	76.495	76.769	78.130	80.637	82.239	83.208	84.175	85.018	85.916	86.685	87.395
% change	0.9	0.4	1.8	3.2	2.0	1.2	1.2	1.0	1.1	0.9	0.8
Median New Price	136.022	134.149	135.657	136.344	137.503	142.399	150.398	150.247	153.908	158.641	163.497
% change	-1.0	-1.4	1.1	0.5	0.9	3.6	5.6	-0.1	2.4	3.1	3.1
Median Resale Price	122.513	119.217	120.714	120.689	124.954	128.527	128.494	131.518	135.340	139.767	144.069
% change	0.3	-2.7	1.3	0.0	3.5	2.9	0.0	2.4	2.9	3.3	3.1
Average Monthly Payment	673	608	587	558	516	549	557	552	565	598	649
% change	-4.1	-9.7	-3.5	-4.9	-7.5	6.4	1.5	-0.9	2.4	5.8	8.5
Affordability Index	215.6	241.8	245.7	255.3	297.0	294.2	297.0	310.9	316.0	313.3	304.2
% change	4.1	12.1	1.6	3.9	16.4	-1.0	1.0	4.7	1.7	-0.9	-2.9
Existing Units Sold	14.315	13.613	13.382	13.838	14.645	15.007	15.096	15.104	15.738	16.242	16.481
% change	-9.9	-4.9	-1.7	3.4	5.8	2.5	0.6	0.1	4.2	3.2	1.5

Notes:

1. Housing start and stock data are in thousands.

2. Median new and existing home prices are for stand-alone units and quoted in thousands of dollars.

3. Average monthly mortgage payment is in current dollars.

4. Affordability index increases as household income strengthens relative to mortgage payments.

5. Existing housing units sold (in thousands) includes both stand-alone and multi-family units.

Table 7: El Paso Nonresidential Construction & Apartment Rents

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Nonresidential Space	443.224	490.187	584.353	181.303	532.773	457.819	494.255	1064.680	1026.541	852.788	726.659
% change	-22.2	10.6	19.2	-69.0	193.9	-14.1	8.0	115.4	-3.6	-16.9	-14.8
Industrial Space Permits	1.626	4.326	1.875	2.784	0.157	4.118	2.688	10.973	3.552	4.312	3.811
% change	-87.9	166.1	-56.7	48.4	-94.4	2521.5	-34.7	308.3	-67.6	21.4	-11.6
Office Space Permit Values	31.737	8.506	21.330	13.460	19.479	24.869	28.432	172.609	166.576	136.778	48.927
% change	-15.3	-73.2	150.8	-36.9	44.7	27.7	14.3	507.1	-3.5	-17.9	-64.2
Other Commercial Space	262.922	290.815	224.007	91.103	243.711	304.958	361.394	765.064	669.038	542.904	479.566
% change	39.2	10.6	-23.0	-59.3	167.5	25.1	18.5	111.7	-12.6	-18.9	-11.7
Miscellaneous Nonres.	146.938	186.540	337.141	73.956	269.425	123.873	101.741	116.033	187.375	168.793	194.356
% change	-55.4	27.0	80.7	-78.1	264.3	-54.0	-17.9	14.0	61.5	-9.9	15.1
0-Bedroom Unit Rent	499	501	523	562	568	595	602	610	617	628	645
% change	4.8	0.4	4.4	7.5	1.1	4.8	1.2	1.3	1.1	1.8	2.7
1-Bedroom Unit Rent	537	540	563	602	620	644	658	673	681	694	711
% change	4.9	0.6	4.3	6.9	3.0	3.9	2.2	2.3	1.2	1.9	2.4
2-Bedroom Unit Rent	635	638	665	718	766	802	812	840	851	868	891
% change	5.0	0.5	4.2	8.0	6.7	4.7	1.2	3.4	1.3	2.0	2.6
3-Bedroom Unit Rent	920	924	964	1030	1086	1133	1151	1175	1192	1215	1248
% change	4.9	0.4	4.3	6.8	5.4	4.3	1.6	2.1	1.4	1.9	2.7
4-Bedroom Unit Rent	1074	1079	1125	1221	1302	1333	1381	1422	1445	1475	1516
% change	4.9	0.5	4.3	8.5	6.6	2.4	3.6	3.0	1.6	2.1	2.8

Notes:

1. All nonresidential construction permits data are quoted in millions of dollars.

2. Other commercial permits include service stations, retail stores, parking garages, warehouses, and public utilities.

3. Miscellaneous permits includes port facilities, recreational buildings, sports stadiums, swimming pools, and health care facilities.

4. All apartment rent data are reported in nominal dollars per month.

Table 8: El Paso International Airport

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Passenger Arrivals	1639.9	1523.0	1520.9	1467.6	1438.5	1375.3	1383.1	1380.2	1382.9	1395.6	1407.4
% change	-2.9	-7.1	-0.1	-3.5	-2.0	-4.4	0.6	-0.2	0.2	0.9	0.8
Domestic Arrivals	1639.9	1523.0	1520.9	1467.6	1438.5	1375.3	1383.1	1380.2	1382.9	1395.6	1407.4
% change	-2.9	-7.1	-0.1	-3.5	-2.0	-4.4	0.6	-0.2	0.2	0.9	0.8
International Arrivals	0	0	0	0	0	0	0	0	0	0	0
% change	0	0	0	0	0	0	0	0	0	0	0
Passenger Departures	1662.9	1540.2	1544.5	1480.0	1455.4	1389.4	1395.1	1383.1	1391.0	1404.7	1415.0
% change	-3.0	-7.4	0.3	-4.2	-1.7	-4.5	0.4	-0.9	0.6	1.0	0.7
Domestic Departures	1662.9	1540.2	1544.5	1480.0	1455.4	1389.4	1395.1	1383.1	1391.0	1404.7	1415.0
% change	-3.0	-7.4	0.3	-4.2	-1.7	-4.5	0.4	-0.9	0.6	1.0	0.7
International Departures	0	0	0	0	0	0	0	0	0	0	0
% change	0	0	0	0	0	0	0	0	0	0	0
In-Bound Freight & Mail	38.053	34.120	47.427	47.052	47.769	43.754	42.702	44.581	43.359	43.625	43.821
% change	-14.3	-10.3	39.0	-0.8	1.5	-8.4	-2.4	4.4	-2.7	0.6	0.5
Out-Bound Freight & Mail	30.601	30.173	43.455	44.455	46.754	44.638	43.776	46.207	45.350	45.678	45.935
% change	-20.0	-1.4	44.0	2.3	5.2	-4.5	-1.9	5.6	-1.9	0.7	0.6

Notes:

1. El Paso International Airport passenger data are in thousands.

2. El Paso International Airport air freight and air mail data are in thousand tons.

Table 9: Northbound International Bridge Traffic

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Pedestrians, All Bridges	8.009	7.490	6.931	6.176	6.091	6.079	6.572	6.848	7.151	7.299	7.467
% change	-4.7	-6.5	-7.5	-10.9	-1.4	-0.2	8.1	4.2	4.4	2.1	2.3
Cars, All Bridges	13.717	10.552	9.968	9.148	9.463	10.640	11.588	12.258	12.811	13.210	13.530
% change	-2.8	-23.1	-5.5	-8.2	3.4	12.4	8.9	5.8	4.5	3.1	2.4
Trucks, All Bridges	0.759	0.633	0.708	0.717	0.725	0.741	0.751	0.758	0.767	0.779	0.794
% change	-2.7	-16.6	11.9	1.3	1.1	2.2	1.4	0.9	1.1	1.7	1.9
Cordova Bridge											
BOTA Pedestrians	0.790	0.902	1.011	0.976	0.879	0.894	0.888	0.940	1.025	1.040	1.059
% change	7.1	14.3	12.1	-3.6	-9.9	1.6	-0.6	5.8	9.1	1.4	1.9
BOTA Personal Vehicles	6.234	4.338	3.573	3.268	3.281	3.596	3.813	3.860	4.125	4.355	4.507
% change	2.6	-30.4	-17.6	-8.5	0.4	9.6	6.0	1.2	6.9	5.6	3.5
BOTA Cargo Vehicles	0.415	0.317	0.322	0.338	0.315	0.317	0.313	0.497	0.318	0.322	0.329
% change	4.0	-23.6	1.6	4.9	-6.8	0.6	-1.1	58.7	-36.0	1.4	2.1
Paso del Norte Bridge											
PDN Pedestrians	6.239	5.383	4.663	4.004	4.112	4.255	4.620	4.793	4.933	5.031	5.152
% change	-8.9	-13.7	-13.4	-14.1	2.7	3.5	8.6	3.7	2.9	2.0	2.4
PDN Personal Vehicles	2.169	2.011	2.340	2.172	2.065	2.333	2.620	2.872	2.788	2.821	2.867
% change	-27.6	-7.3	16.4	-7.2	-4.9	13.0	12.3	9.6	-2.9	1.2	1.6
DCL Personal Vehicles	1.259	1.219	1.242	1.150	1.192	1.167	1.147	1.204	1.209	1.221	1.239
% change	5.0	-3.2	1.9	-7.4	3.7	-2.1	-1.7	4.9	0.4	1.0	1.4
Ysleta Zaragoza Bridge											
Ysleta Pedestrians	0.981	1.204	1.256	1.196	1.100	0.930	1.064	1.115	1.193	1.228	1.255
% change	19.2	22.8	4.3	-4.8	-8.0	-15.4	14.4	4.8	6.9	3.0	2.2
Ysleta Personal Vehicles	3.528	2.396	2.092	1.857	2.172	2.807	3.239	3.438	3.721	3.842	3.931
% change	-1.3	-32.1	-12.7	-11.2	17.0	29.2	15.4	6.1	8.2	3.3	2.3
Ysleta Cargo Vehicles	0.344	0.316	0.386	0.380	0.410	0.424	0.438	0.261	0.449	0.457	0.465
% change	-9.8	-8.2	22.2	-1.7	8.0	3.5	3.3	-40.4	71.9	1.8	1.8
DYL Personal Vehicles	0.526	0.588	0.722	0.701	0.753	0.738	0.770	0.885	0.969	0.971	0.986
% change	94.6	11.6	22.8	-2.9	7.4	-2.0	4.4	15.0	9.4	0.2	1.6

Notes:

1. All bridge data are for northbound traffic categories into the City of El Paso.

2. Pedestrian, personal vehicle (cars, light trucks, mini-vans), and cargo vehicle data are reported in millions.

3. DCL and DYL are acronyms for Stanton Dedicated Commuter Lane and Ysleta Dedicated Commuter Lane, respectively.

Table 10: El Paso County Hotel Activity

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Hotels in Operation	77	78	81	81	79	76	77	80	81	82	83
% change	-1.3	1.3	3.8	0.0	-2.5	-3.8	1.3	3.9	1.3	1.2	1.2
Room Nights Available	2910.7	3012.9	3142.9	3197.6	3266.5	3194.4	3191.6	3290.5	3358.7	3400.5	3435.7
% change	-1.1	3.5	4.3	1.7	2.2	-2.2	-0.1	3.1	2.1	1.2	1.0
Room Nights Sold	1972.6	1919.6	2063.1	2185.0	2116.0	2070.0	2124.0	2192.0	2245.7	2286.7	2319.7
% change	-0.2	-2.7	7.5	5.9	-3.2	-2.2	2.6	3.2	2.4	1.8	1.4
Hotel Occupancy Rate	67.8	63.7	65.6	68.3	64.8	64.8	66.6	66.6	66.9	67.2	67.5
Hotel Room Price	72.39	68.50	70.07	69.50	70.84	71.37	75.33	78.04	80.11	81.87	83.53
% change	5.2	-5.4	2.3	-0.8	1.9	0.7	5.6	3.6	2.7	2.2	2.0
Actual Revenue per Room	49.06	43.64	46.00	47.49	45.89	46.25	50.14	51.98	53.56	55.05	56.40
% change	6.1	-11.0	5.4	3.2	-3.4	0.8	8.4	3.7	3.0	2.8	2.4
Total Revenues	142.791	131.481	144.562	151.851	149.899	147.729	160.011	171.056	179.897	187.211	193.771
% change	4.9	-7.9	9.9	5.0	-1.3	-1.4	8.3	6.9	5.2	4.1	3.5

Notes:

1. El Paso County hotel room night data are reported in thousands.

2. El Paso County hotel pricing data are reported in nominal dollars.

3. Total hotel revenues are reported in million nominal dollars.

Table 11: El Paso Water Consumption

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Water Customers	199.879	202.788	207.456	212.205	216.899	224.083	219.251	223.105	227.243	231.239	234.974
% change	2.3	1.5	2.3	2.3	2.2	3.3	-2.2	1.8	1.9	1.8	1.6
Single-Family Meters	158.989	161.482	164.450	169.261	172.609	174.519	176.399	178.803	182.016	185.091	188.095
% change	1.8	1.6	1.8	2.9	2.0	1.1	1.1	1.4	1.8	1.7	1.6
Multi-Family Meters	4.783	4.769	4.750	4.740	4.751	4.747	4.748	4.778	4.826	4.873	4.909
% change	0.6	-0.3	-0.4	-0.2	0.2	-0.1	0.0	0.6	1.0	1.0	0.7
Commercial Business Meters	9.088	10.280	10.581	10.655	10.060	10.087	10.097	10.182	10.304	10.445	10.539
% change	4.1	13.1	2.9	0.7	-5.6	0.3	0.1	0.8	1.2	1.4	0.9
Industrial Business Meters	0.176	0.161	0.161	0.163	0.162	0.158	0.153	0.149	0.148	0.147	0.146
% change	-2.8	-8.5	0.0	1.2	-0.6	-2.5	-3.2	-2.6	-0.7	-0.7	-0.7
Other Meter Connections	26.843	26.096	27.514	27.386	29.317	34.572	27.854	29.193	29.948	30.682	31.285
% change	5.4	-2.8	5.4	-0.5	7.1	17.9	-19.4	4.8	2.6	2.5	2.0
Total Water Consumed	32.548	34.000	34.140	36.997	36.927	35.611	34.289	33.981	33.790	33.828	33.871
% change	-0.3	4.5	0.4	8.4	-0.2	-3.6	-3.7	-0.9	-0.6	0.1	0.1
Single-Family Gallons	17.617	18.705	18.722	20.097	19.476	18.672	18.165	17.646	17.485	17.435	17.399
% change	-3.5	6.2	0.1	7.3	-3.1	-4.1	-2.7	-2.9	-0.9	-0.3	-0.2
Multi-Family Gallons	2.963	3.022	3.081	3.147	3.079	2.953	2.817	2.862	2.862	2.865	2.872
% change	-2.1	2.0	2.0	2.2	-2.2	-4.1	-4.6	1.6	0.0	0.1	0.2
Commercial Gallons Cons.	3.684	3.968	4.122	4.053	4.048	4.158	3.689	3.696	3.679	3.685	3.696
% change	-1.4	7.7	3.9	-1.7	-0.1	2.7	-11.3	0.2	-0.5	0.2	0.3
Industrial Gallons Consumed	0.275	0.246	0.247	0.330	0.347	0.387	0.495	0.391	0.394	0.396	0.394
% change	-10.4	-10.9	0.6	33.5	5.3	11.4	28.1	-21.0	0.7	0.5	-0.4
Other Water Consumption	8.008	8.060	7.968	9.371	9.978	9.441	9.123	9.385	9.370	9.447	9.509
% change	9.8	0.6	-1.1	17.6	6.5	-5.4	-3.4	2.9	-0.2	0.8	0.7

Notes:

1. Water customer meter connections are reported in thousands.

2. El Paso water consumption data are reported in billion gallons.

3. Other water accounts include schools, parks, churches, and government agencies.

Table 12: Ciudad Juárez Demographic Indicators

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ciudad Juarez Population	1384.1	1377.8	1332.1	1334.2	1342.1	1354.7	1372.9	1391.2	1415.0	1437.5	1458.3
% change	1.8	-0.5	-3.3	0.2	0.6	0.9	1.3	1.3	1.7	1.6	1.4
Resident Births	32.457	29.720	26.376	22.949	23.989	23.808	23.970	22.880	23.730	24.382	24.878
% change	15.7	-8.4	-11.3	-13.0	4.5	-0.8	0.7	-4.5	3.7	2.7	2.0
Resident Deaths	7.911	8.557	10.143	8.769	7.116	7.257	7.340	7.836	7.995	7.846	7.922
% change	21.1	8.2	18.5	-13.5	-18.9	2.0	1.1	6.8	2.0	-1.9	1.0
Net Migration	-0.231	-27.416	-61.951	-12.137	-8.901	-4.046	1.618	3.237	8.098	5.933	3.865
Domestic Migration	7.298	-19.563	-54.087	-10.411	-5.922	-1.168	3.856	9.951	13.737	10.789	8.341
International Migration	-7.529	-7.853	-7.864	-1.726	-2.979	-2.878	-2.238	-6.714	-5.638	-4.855	-4.476
Ciudad Juarez Water Meters	413.719	425.300	431.452	436.899	441.464	445.282	449.217	453.536	459.729	467.446	474.922
% change	5.8	2.8	1.4	1.3	1.0	0.9	0.9	1.0	1.4	1.7	1.6
Total Water Consumption	142.279	143.218	143.522	141.042	136.438	137.122	137.948	138.633	139.183	140.097	141.159
% change	3.7	0.7	0.2	-1.7	-3.3	0.5	0.6	0.5	0.4	0.7	0.8
Registered Automobiles	348.294	354.659	374.882	365.662	375.312	397.003	417.454	426.006	436.412	447.326	456.951
% change	5.2	1.8	5.7	-2.5	2.6	5.8	5.2	2.0	2.4	2.5	2.2
Registered Cargo Vehicles	85.948	86.664	90.646	86.037	86.544	91.669	93.994	96.600	98.656	100.433	102.322
% change	4.8	0.8	4.6	-5.1	0.6	5.9	2.5	2.8	2.1	1.8	1.9
UACJ Enrollment	18.282	19.003	19.222	20.808	23.899	25.916	25.490	26.714	27.387	27.871	28.328
% change	-2.8	3.9	1.2	8.3	14.9	8.4	-1.6	4.8	2.5	1.8	1.6
ITRCJ Enrollment	4.785	5.007	5.087	5.063	5.268	5.290	6.013	6.510	6.678	6.773	6.864
% change	4.4	4.6	1.6	-0.5	4.0	0.4	13.7	8.3	2.6	1.4	1.3

Notes:

1. All Ciudad Juarez population, water meter, vehicle, and college enrollment data are reported in thousands.

2. Ciudad Juarez water consumption is reported in million cubic meters.

3. UACJ is the acronym for Universidad Autonoma de Ciudad Juarez.

4. ITRCJ is the acronym for Instituto Tecnologico Regional de Ciudad Juarez.

Table 13: Ciudad Juárez Economic Indicators

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Formal Sector Emp.	322.737	302.365	312.920	313.994	335.806	345.732	376.040	408.607	426.322	436.450	443.649
% change	-13.3	-6.3	3.5	0.3	6.9	3.0	8.8	8.7	4.3	2.4	1.6
Total Mfg. Employment	187.382	170.893	181.726	186.882	206.128	216.560	241.560	270.099	284.440	291.932	296.962
% change	-18.9	-8.8	6.3	2.8	10.3	5.1	11.5	11.8	5.3	2.6	1.7
Commerce Employment	42.937	40.455	39.986	38.902	39.259	39.907	41.775	42.383	43.279	44.144	44.825
% change	1.4	-5.8	-1.2	-2.7	0.9	1.7	4.7	1.5	2.1	2.0	1.5
Regulated Industry Emp.	11.069	10.686	11.462	11.994	12.363	13.233	14.331	14.890	15.533	15.884	16.155
% change	-2.2	-3.5	7.3	4.6	3.1	7.0	8.3	3.9	4.3	2.3	1.7
Services & Other Emp.	81.349	80.331	79.746	76.216	78.056	76.032	78.374	81.235	83.070	84.490	85.707
% change	-7.3	-1.3	-0.7	-4.4	2.4	-2.6	3.1	3.7	2.3	1.7	1.4
IMMEX Plants	335	338	335	327	323	325	317	318	325	327	329
% change	3.4	0.9	-0.9	-2.4	-1.2	0.6	-2.5	0.3	2.2	0.6	0.6
IMMEX Employment	228.417	164.613	177.712	178.690	188.084	202.197	214.618	241.342	257.828	266.008	269.944
% change	-6.5	-27.9	8.0	0.6	5.3	7.5	6.1	12.5	6.8	3.2	1.5
IMMEX Wages	4.48	4.47	4.83	4.90	4.80	5.03	5.02	5.08	4.06	4.41	4.70
% change	-2.0	-0.2	8.0	1.4	-1.9	4.8	-0.2	1.2	-20.1	8.5	6.7
Total Electric Meters	385.640	401.483	408.743	397.979	393.151	414.720	413.138	414.134	418.852	424.668	430.827
% change	0.4	4.1	1.8	-2.6	-1.2	5.5	-0.4	0.2	1.1	1.4	1.5
Total GWH Consumption	3686.8	3404.4	3477.7	3456.6	3460.0	3533.6	3699.7	3805.2	3968.4	4096.5	4179.388
% change	-5.6	-7.7	2.2	-0.6	0.1	2.1	4.7	2.9	4.3	3.2	2.0

Notes:

1. Ciudad Juarez employment data and electricity meters are reported in thousands.

2. Ciudad Juarez formal sector jobs are those covered by the social security system in Mexico.

3. Regulated sectors include transportation, communications, and public utilities.

4. IMMEX is a Mexican government program facilitating importation of intermediate goods to be processed and re-exported.

5. IMMEX data are annual averages; the non-IMMEX employment data reflect the number of jobs at the end of the year.

6. IMMEX wages are in nominal dollars per hour.

7. Ciudad Juarez total electricity consumption data are reported in gigawatt hours.

Table 14: Chihuahua City Demographic Indicators

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Chihuahua City Population	800.211	812.490	819.543	832.661	845.764	857.303	868.096	878.062	889.343	900.869	912.124
% change	1.6	1.5	0.9	1.6	1.6	1.4	1.3	1.1	1.3	1.3	1.2
Chihuahua City Births	14.965	15.112	15.194	14.762	15.609	15.300	14.882	15.170	15.339	15.494	15.641
% change	-1.9	1.0	0.5	-2.8	5.7	-2.0	-2.7	1.9	1.1	1.0	1.0
Chihuahua City Deaths	4.805	5.087	5.730	5.530	5.666	5.425	5.366	6.216	6.106	6.161	6.212
% change	13.0	5.9	12.6	-3.5	2.5	-4.3	-1.1	15.8	-1.8	0.9	0.8
Net Migration	2.572	2.254	-2.411	3.886	3.161	1.663	1.277	1.012	2.047	2.193	1.826
Chihuahua City Water Meters	272.002	279.352	284.713	289.724	294.453	299.995	308.131	314.421	320.363	326.177	331.917
% change	2.5	2.7	1.9	1.8	1.6	1.9	2.7	2.0	1.9	1.8	1.8
Total Water Consumption	65.106	65.088	65.575	66.297	66.044	65.257	70.332	72.220	74.021	74.729	75.099
% change	2.4	0.0	0.7	1.1	-0.4	-1.2	7.8	2.7	2.5	1.0	0.5
Registered Automobiles	240.304	255.104	279.236	277.850	295.187	332.812	350.246	377.070	396.037	412.421	425.914
% change	3.7	6.2	9.5	-0.5	6.2	12.7	5.2	7.7	5.0	4.1	3.3
Registered Cargo Vehicles	105.759	108.962	115.511	111.945	116.250	126.931	131.293	133.568	136.253	138.563	141.159
% change	2.9	3.0	6.0	-3.1	3.8	9.2	3.4	1.7	2.0	1.7	1.9
UACH Enrollment	17.548	18.929	19.214	21.219	22.999	23.062	24.681	24.867	25.317	25.789	26.171
% change	-9.2	7.9	1.5	10.4	8.4	0.3	7.0	0.8	1.8	1.9	1.5
ITRCH Number 1 Enrollment	6.769	7.526	7.404	7.049	7.076	7.127	7.045	7.685	7.770	7.871	7.984
% change	3.3	11.2	-1.6	-4.8	0.4	0.7	-1.2	9.1	1.1	1.3	1.4

Notes:

1. Chihuahua City population, water meter, vehicle, and college enrollment data are reported in thousands.

2. Chihuahua City water consumption data are reported in million cubic meters.

3. UACH is the acronym for Universidad Autonoma de Chihuahua.

4. ITRCH Number 1 is the acronym for Instituto Tecnologico Regional de Chihuahua Numero 1.

Table 15: Chihuahua City Economic Indicators

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Formal Sector Emp.	175.573	176.277	188.172	197.584	214.381	218.408	223.640	235.534	246.056	252.294	257.192
% change	-3.5	0.4	6.7	5.0	8.5	1.9	2.4	5.3	4.5	2.5	1.9
Total Mfg. Employment	62.030	63.434	69.948	76.111	82.546	85.269	83.330	90.491	96.388	99.472	101.636
% change	-10.4	2.3	10.3	8.8	8.5	3.3	-2.3	8.6	6.5	3.2	2.2
Commerce Employment	38.517	38.702	40.268	41.765	41.354	43.318	46.050	48.818	51.165	52.332	53.575
% change	8.0	0.5	4.0	3.7	-1.0	4.7	6.3	6.0	4.8	2.3	2.4
Regulated Industry Emp.	8.042	7.829	8.023	8.294	8.657	9.627	10.401	10.889	11.453	11.765	12.001
% change	1.8	-2.6	2.5	3.4	4.4	11.2	8.0	4.7	5.2	2.7	2.0
Services & Other Emp.	66.984	66.312	69.933	71.414	81.824	80.194	83.859	85.336	87.050	88.726	89.981
% change	-3.1	-1.0	5.5	2.1	14.6	-2.0	4.6	1.8	2.0	1.9	1.4
IMMEX Plants	87	91	93	93	94	100	106	105	108	110	111
% change	7.4	4.6	2.2	0.0	1.1	6.4	6.0	-0.9	2.9	1.9	0.9
IMMEX Employment	44.400	36.200	45.000	52.700	62.020	65.156	69.143	69.485	74.753	76.905	78.331
% change	-8.1	-18.5	24.3	17.1	17.7	5.1	6.1	0.5	7.6	2.9	1.9
IMMEX Wages	6.10	5.21	5.27	5.55	5.19	5.68	5.88	6.06	4.88	5.24	5.65
% change	4.0	-14.6	1.1	5.4	-6.6	9.6	3.4	3.2	-19.5	7.3	7.9
Total Electricity Meters	290.041	294.795	297.605	296.360	301.034	307.221	311.936	316.236	321.278	326.654	331.678
% change	3.7	1.6	1.0	-0.4	1.6	2.1	1.5	1.4	1.6	1.7	1.5
Total GWH Consumption	2323.5	2291.8	2442.8	2551.4	2580.2	2630.6	2749.6	2823.5	2922.1	3010.9	3081.1
% change	-0.3	-1.4	6.6	4.4	1.1	2.0	4.5	2.7	3.5	3.0	2.3

Notes:

1. Chihuahua City employment data and electricity meters are reported in thousands.

2. Chihuahua City formal sector jobs are those covered by the social security system in Mexico.

3. Regulated sectors include transportation, communications, and public utilities.

4. IMMEX is a Mexican government program facilitating importation of intermediate goods to be processed and re-exported.

5. IMMEX data are annual averages; the non-IMMEX employment data reflect the number of jobs at the end of the year.

6. IMMEX wages are in nominal dollars per hour.

7. Chihuahua City total electricity consumption data are reported in gigawatt hours.

Table 16: Las Cruces Demographic & Other Indicators

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Population	200.855	205.401	210.237	212.890	214.208	213.697	213.676	214.295	215.415	216.890	218.627
% change	1.5	2.3	2.4	1.3	0.6	-0.2	0.0	0.3	0.5	0.7	0.8
Business Establishments	3.759	3.731	3.610	3.630	3.567	3.554	3.546	3.541	3.571	3.601	3.626
% change	-1.2	-0.7	-3.2	0.6	-1.7	-0.4	-0.2	-0.1	0.8	0.8	0.7
Business Bankruptcies	24	31	34	16	19	22	17	17	16	15	15
% change	50.0	29.2	9.7	-52.9	18.8	15.8	-22.7	0.0	-5.9	-6.3	0.0
Personal Bankruptcies	489	598	659	522	479	409	464	414	408	405	418
% change	34.3	22.3	10.2	-20.8	-8.2	-14.6	13.4	-10.8	-1.4	-0.7	3.2
NMSU Fall Enrollment	17.198	18.505	18.552	18.024	17.651	16.765	15.829	15.490	14.852	15.011	15.240
% change	2.8	7.6	0.3	-2.8	-2.1	-5.0	-5.6	-2.1	-4.1	1.1	1.5
DABCC Fall Enrollment	8.336	8.796	9.821	9.888	9.270	8.837	8.448	8.252	8.157	8.256	8.405
% change	9.9	5.5	11.7	0.7	-6.3	-4.7	-4.4	-2.3	-1.2	1.2	1.8
Personal Income	5428.3	5658.9	5965.7	6187.2	6412.3	6227.7	6537.0	6723.6	6926.8	7212.5	7545.5
% change	5.0	4.2	5.4	3.7	3.6	-2.9	5.0	2.9	3.0	4.1	4.6
Labor and Proprietor Earnings	3373.1	3466.8	3657.4	3704.8	3716.6	3728.6	3848.9	3962.3	4075.4	4225.4	4396.6
% change	3.5	2.8	5.5	1.3	0.3	0.3	3.2	2.9	2.9	3.7	4.0
Real GMP	5.745	5.929	6.043	5.959	5.859	5.908	5.971	5.979	6.039	6.136	6.249
% change	2.7	3.2	1.9	-1.4	-1.7	0.8	1.1	0.1	1.0	1.6	1.8
Total Employment	91.583	90.645	90.929	92.322	92.097	93.671	94.333	94.701	96.026	97.359	98.771
% change	1.7	-1.0	0.3	1.5	-0.2	1.7	0.7	0.4	1.4	1.4	1.5

Notes:

1. The Las Cruces metropolitan economy is comprised by Doña Ana County.

2. Population, business establishment, college enrollment, and employment data are expressed in thousands.

3. All income and earnings data are expressed in millions of dollars.

4. Labor and proprietor earnings encompass wage and salary disbursements, other labor income, and proprietor earnings.

5. Real gross metropolitan product data are expressed in billions of 2009 dollars.

Table 17: Las Cruces Employment

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Las Cruces Total Emp.	91.583	90.645	90.929	92.322	92.097	93.671	94.333	94.701	96.026	97.359	98.771
% change	1.7	-1.0	0.3	1.5	-0.2	1.7	0.7	0.4	1.4	1.4	1.5
Manufacturing	3.452	3.233	3.150	3.441	3.264	3.138	2.943	2.934	2.926	2.903	2.901
% change	-1.5	-6.3	-2.6	9.2	-5.1	-3.9	-6.2	-0.3	-0.3	-0.8	-0.1
Construction Employment	6.438	5.781	5.634	5.812	5.676	5.701	5.673	5.762	5.908	6.020	6.111
% change	-5.9	-10.2	-2.5	3.2	-2.3	0.4	-0.5	1.6	2.5	1.9	1.5
Transportation & Warehousing	2.445	2.385	2.308	2.464	2.556	2.473	2.479	2.478	2.490	2.514	2.549
% change	-2.9	-2.5	-3.2	6.8	3.7	-3.2	0.2	0.0	0.5	1.0	1.4
Finance, Insurance & Real Estate	5.076	5.231	4.877	4.945	5.143	4.975	5.090	5.113	5.153	5.249	5.374
% change	5.2	3.1	-6.8	1.4	4.0	-3.3	2.3	0.5	0.8	1.9	2.4
Retail Trade Employment	8.812	8.423	8.402	8.796	9.035	9.027	9.133	9.248	9.297	9.392	9.491
% change	-0.5	-4.4	-0.2	4.7	2.7	-0.1	1.2	1.3	0.5	1.0	1.1
Hotels & Food Services	6.690	6.517	6.588	6.736	7.013	7.380	7.442	7.497	7.588	7.753	7.949
% change	1.4	-2.6	1.1	2.2	4.1	5.2	0.8	0.7	1.2	2.2	2.5
Healthcare & Social Services	12.644	12.652	12.989	13.993	14.656	14.268	14.753	15.649	16.378	16.830	17.151
% change	2.5	0.1	2.7	7.7	4.7	-2.6	3.4	6.1	4.7	2.8	1.9
Professional & Technical Svcs.	4.714	4.802	5.146	4.718	4.825	5.357	5.153	5.136	5.150	5.166	5.211
% change	9.8	1.9	7.2	-8.3	2.3	11.0	-3.8	-0.3	0.3	0.3	0.9
Temporary Help & Call Centers	4.058	4.396	4.760	4.782	4.856	4.931	5.273	5.325	5.391	5.479	5.611
% change	14.0	8.3	8.3	0.5	1.5	1.5	6.9	1.0	1.2	1.6	2.4
State Government	8.959	8.974	8.849	8.452	8.174	8.130	8.074	8.031	8.006	8.033	8.097
% change	1.7	0.2	-1.4	-4.5	-3.3	-0.5	-0.7	-0.5	-0.3	0.3	0.8
Local Government	8.742	8.721	8.631	8.629	8.632	8.691	8.743	8.792	8.817	8.847	8.896
% change	1.7	-0.2	-1.0	0.0	0.0	0.7	0.6	0.6	0.3	0.3	0.6
Federal Civilian Govt.	3.862	4.056	4.274	4.062	3.881	3.756	3.640	3.578	3.560	3.585	3.596
% change	3.8	5.0	5.4	-5.0	-4.5	-3.2	-3.1	-1.7	-0.5	0.7	0.3
Military Employment	0.579	0.584	0.594	0.600	0.595	0.592	0.557	0.542	0.531	0.535	0.539
% change	2.3	0.9	1.7	1.0	-0.8	-0.5	-5.9	-2.7	-2.0	0.8	0.7
Not Elsewhere Classified	15.112	14.890	14.727	14.892	13.791	15.252	15.380	14.616	14.833	15.052	15.295
% change	0.7	-1.5	-1.1	1.1	-7.4	10.6	0.8	-5.0	1.5	1.5	1.6

Notes:

1. Employment data are expressed in thousands.

2. Not Elsewhere Classified includes communications, arts and entertainment, private education, and wholesale trade.

Table 18: Las Cruces Personal Income

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Personal Income	5428.3	5658.9	5965.7	6187.2	6412.3	6227.7	6537.0	6723.6	6926.8	7212.5	7545.5
% change	5.0	4.2	5.4	3.7	3.6	-2.9	5.0	2.9	3.0	4.1	4.6
Wages and Salaries	2483.7	2546.4	2608.0	2623.7	2660.8	2706.0	2779.4	2854.7	2938.0	3046.3	3173.2
% change	6.4	2.5	2.4	0.6	1.4	1.7	2.7	2.7	2.9	3.7	4.2
Other Labor Income	509.7	515.9	554.1	581.9	604.5	572.1	579.1	587.2	603.4	624.2	647.6
% change	4.2	1.2	7.4	5.0	3.9	-5.3	1.2	1.4	2.8	3.4	3.8
Proprietor Incomes	379.8	404.6	495.4	499.3	451.3	450.5	490.5	520.4	542.5	571.0	597.8
% change	-13.0	6.5	22.4	0.8	-9.6	-0.2	8.9	6.1	4.2	5.3	4.7
Social Ins. Contributions	214.5	224.8	229.7	186.8	189.8	245.6	255.4	265.4	273.7	283.4	294.4
% change	6.5	4.8	2.2	-18.7	1.6	29.4	4.0	3.9	3.1	3.6	3.9
Residence Adjustments	8.9	22.0	17.9	21.3	60.5	30.0	34.2	60.2	66.6	70.2	74.8
% change	-83.3	148.4	-18.8	19.0	184.3	-50.5	14.2	76.0	10.6	5.5	6.6
Dividends, Int., Rent	931.8	892.0	889.9	992.0	1176.2	1065.2	1100.3	1128.4	1154.9	1190.4	1254.1
% change	2.7	-4.3	-0.2	11.5	18.6	-9.4	3.3	2.6	2.4	3.1	5.3
Retirement Transfers	1132.9	1232.8	1303.5	1330.4	1333.5	1346.8	1520.4	1552.1	1609.2	1704.0	1795.4
% change	16.6	8.8	5.7	2.1	0.2	1.0	12.9	2.1	3.7	5.9	5.4
Inc. Maint. Transfers	175.1	216.1	251.4	259.5	263.7	264.5	264.1	264.0	265.9	270.4	277.3
% change	6.6	23.4	16.3	3.2	1.6	0.3	-0.2	0.0	0.7	1.7	2.6
Unemployment Transfers	21.0	54.0	75.4	65.9	51.5	38.3	24.5	21.9	20.1	19.5	19.8
% change	49.5	157.0	39.7	-12.6	-21.9	-25.5	-36.1	-10.4	-8.6	-2.9	1.6

Notes:

1. All Las Cruces income data are expressed in millions of dollars.

2. Social insurance contributions are deducted from total regional income estimates.

3. Retirement transfer payments include social security and other retirement payments.

4. Income maintenance transfers include temporary assistance for needy families and other payments.

5. Unemployment transfer payments include unemployment insurance payments to individuals.

The University of Texas at El Paso

Announces

Borderplex Long-Term Economic Trends to 2029

UTEP is pleased to announce the publication of the 2010 edition of its primary source of long-term border business outlook information. Topics covered include detailed economic projections for El Paso and Las Cruces, plus economic and demographic forecasts for Ciudad Juárez and Chihuahua City. Forecasts are generated utilizing the 215-equation UTEP Border Region Econometric Model developed under the auspices of a corporate research support program from El Paso Electric Company.

The authors of this publication are UTEP Wells Fargo Professor Tom Fullerton and UTEP Associate Economist Angel L. Molina, Jr. Dr. Fullerton holds degrees from UTEP, Iowa State University, Wharton School of Finance at the University of Pennsylvania, and University of Florida. Prior experience includes positions as Economist in the Executive Office of the Governor of Idaho, International Economist in the Latin America Service of Wharton Econometrics, and Senior Economist at the Bureau of Economic and Business Research at the University of Florida. Angel Molina holds an M.S. in Economics from UTEP and has published research on cross-border growth patterns and linkages.

The long-term border business outlook through 2029 can be purchased for $10 per copy (only electronic copies are available). Each subscription entitles your organization to one free admission to the future UTEP Border Economic Forums. Please indicate to what address the report(s) should be mailed (also include telephone, fax, and email address):

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The UTEP Border Region Modeling Project
& UACJ Press

Announce the Publication of

Basic Border Econometrics

The University of Texas at El Paso Border Region Modeling Project is pleased to announce **Basic Border Econometrics**, a publication from Universidad Autónoma de Ciudad Juárez. Editors of this new collection are Martha Patricia Barraza de Anda of the Department of Economics at Universidad Autónoma de Ciudad Juárez and Tom Fullerton of the Department of Economics & Finance at the University of Texas at El Paso.

Professor Barraza is an award winning economist who has taught at several universities in Mexico and has published in academic research journals in Mexico, Europe, and the United States. Dr. Barraza currently serves as Research Provost at UACJ. Professor Fullerton has authored econometric studies published in academic research journals of North America, Europe, South America, Asia, Africa, and Australia. Dr. Fullerton has delivered economics lectures in Canada, Colombia, Ecuador, Finland, Germany, Japan, Korea, Mexico, the United Kingdom, the United States, and Venezuela.

Border economics is a field in which many contradictory claims are often voiced, but careful empirical documentation is rarely attempted. **Basic Border Econometrics** is a unique collection of ten separate studies that empirically assess carefully assembled data and econometric evidence for a variety of different topics. Among the latter are peso fluctuations and cross-border retail impacts, border crime and boundary enforcement, educational attainment and border income performance, pre- and post-NAFTA retail patterns, self-employed Mexican-American earnings, maquiladora employment patterns, merchandise trade flows, and Texas border business cycles.

Contributors to the book include economic researchers from the University of Texas at El Paso, New Mexico State University, University of Texas Pan American, Texas A&M International University, El Colegio de la Frontera Norte, and the Federal Reserve Bank of Dallas. Their research interests cover a wide range of fields and provide multi-faceted angles from which to examine border economic trends and issues.

A limited number of **Basic Border Econometrics** can be purchased for $10 per copy. Please contact Professor Martha Patricia Barraza de Anda at mbarraza@uacj.mx for information on how to order copies of the book.

Texas Western Press

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Inflationary Studies for Latin America

Texas Western Press of the University of Texas at El Paso is pleased to announce **Inflationary Studies for Latin America**, a joint publication with Universidad Autónoma de Ciudad Juárez. Editors of this collection are Cuautémoc Calderón Villarreal of the Department of Economics at Universidad Autónoma de Ciudad Juárez and Tom Fullerton of the Department of Economics & Finance at the University of Texas at El Paso. The forward to this book is by Abel Beltrán del Río, President and Founder of CIEMEX-WEFA.

Professor Calderón is an award winning economist who has taught and published in Mexico, France, and the United States. Dr. Calderón spent a year as a Fulbright Scholar at the University of Texas at El Paso. Professor Fullerton has published research articles in North America, Europe, Africa, South America, Asia, and Australia. The author of several econometric forecasts regarding impacts of the Brady Initiative for Debt Relief in Latin America, Dr. Fullerton has delivered economics lectures in Canada, Colombia, Ecuador, Finland, Germany, Japan, Korea, Mexico, the United States, and Venezuela.

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