

# TIJUANA REGIONAL PROFILE

PRODUCED BY SAN DIEGO REGIONAL EDC



**TIJUANA:** The largest city in the state of Baja California sits at one of the busiest land border crossings in the world. Together with San Diego, Tijuana is part of a dynamic cross-border metropolis where deep economic and cultural linkages result in the creation of value, jobs and exports. The unique dynamics of the region provide local companies with an important comparative advantage in the global economy.

In Tijuana, employment in global companies has grown steadily, with many workers engaged in STEM and R&D-intensive industries. The city has become a powerhouse in industries such as semiconductors, medical devices, aerospace, electrical equipment, and audiovisual and communications equipment. Quality universities and an attractive cost of doing business have supported the development of these high-growth industries, attracting more than \$5.6 billion of foreign direct investment to the region since 2012.<sup>1</sup>

On average, 137,000 people cross the border each day between San Diego and Tijuana.<sup>2</sup> Like the economy, people's lives exist on both sides of the border. Tijuana's vibrant cultural scene – with trendy coffee shops, world-class restaurants, museums, art galleries and a top-ranked soccer team – provides an enriching quality of life to residents. Nearby beaches in Rosarito and Ensenada, as well as the burgeoning Valle de Guadalupe wine region, attract tourists year-round.

## TIJUANA QUICK FACTS

Population (2015): 1.6M

Gross Domestic Product (2014): \$21B

Unemployment (2015): 4.1%

Sources: <sup>1</sup>Ministry of Economy, 2012-2016. <sup>2</sup>U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, based on the U.S. Department of Homeland Security, Customs and Border Protection 2017

The map shows the border between the United States (LA, SD) and Mexico (MX). Tijuana and Ensenada are marked on the Mexican side, and San Diego is marked on the US side. A red star is placed on the Mexican coast near Ensenada.

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## ECONOMIC DRIVERS

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-  **AEROSPACE**
-  **AUDIO & VIDEO EQUIPMENT**
-  **AUTOMOTIVE**
-  **ELECTRICAL EQUIPMENT**
-  **SEMICONDUCTORS**

# TIJUANA: ECONOMIC DRIVERS

## MEDICAL DEVICES



The city's manufacturing ecosystem offers a combination of competitive factors such as 30 years of experience in the medical devices industry, world class quality, competitive labor costs, local supply chain and access to one of North America's largest labor pools in the industry. .

**97**  
companies

**\$599M**  
production value

KEY  
COMPANIES

Care Fusion • Welch Allyn • Thermo

## AEROSPACE



The aerospace industry has been seen growth in Tijuana for over 40 years – the established ecosystem ranges from multinationals to small aerospace and defense firms.

**\$14.3K**  
value added per  
worker

**4X**  
more concentrated than  
MX aerospace sector

KEY  
COMPANIES

Cubic • Honeywell • BAE Systems

## AUDIO & VIDEO EQUIPMENT



The audio and video equipment industry has more than 50 years of history in Tijuana and produces millions of units each year, including more than 20 million televisions.

**21K**  
jobs

**\$419M**  
production value

KEY  
COMPANIES

Samsung • Sanyo • Panasonic

## AUTOMOTIVE



From truck chassis and stamped metal parts, to seat belts and sound speakers; from carbon fiber body kits, to electronic sensors – Tijuana's automotive manufacturing companies fill the demand of today's auto industry.

**\$10.3K**  
value added per  
worker

**3.3X**  
more concentrated than  
MX automotive sector

KEY  
COMPANIES

Hyundai • Toyota • Goodridge

## ELECTRICAL EQUIPMENT



Companies in the electronic equipment industry produce a variety of electrical equipment, appliances and electrical components.

**\$147M**  
value added

**2.9X**  
more concentrated than  
MX electrical sector

KEY  
COMPANIES

Philips • Foxconn • Sanyo

## SEMICONDUCTORS



Production of semiconductors and parts supports the supply chain for a variety of electrical and electronic devices.

**20K**  
jobs

**71**  
companies

KEY  
COMPANIES

Plantronics • Kyocera



**PAPERS, PLASTICS AND METALS:** Tijuana has established industries in manufacturing of **basic goods** such as paper, plastic and metals. The prevalence of companies in these industries enable a simplified and **reliable supply-chain** process for the STEM-focused industries above, which rely heavily on the availability of basic goods for production.

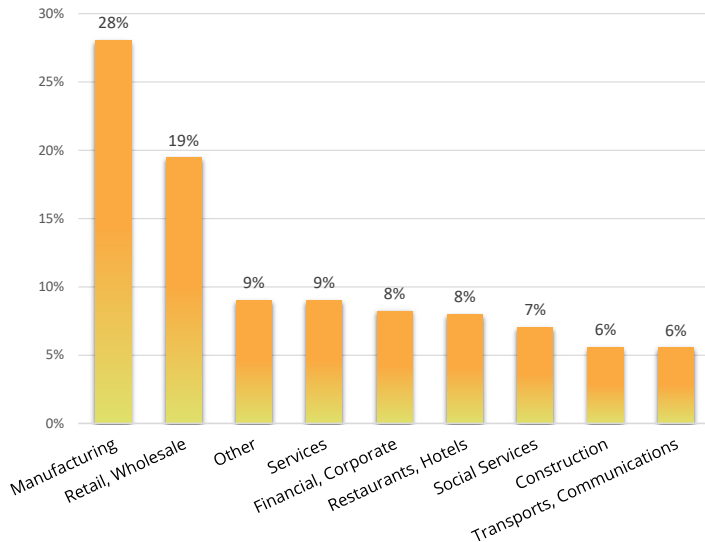
# TIJUANA: EDUCATED TALENT

Tijuana boasts a high-skilled and specialized workforce. The city has the highest concentration of talent in Mexico in medical device manufacturing and a host of other STEM-intensive industries. Strong universities and vocational high schools work closely with the private sector to prepare graduates for careers in advanced manufacturing and the service sector. Companies are supported by 8,000 professional, scientific and technical service providers, while a variety of incubators, accelerators and coworking spaces cater to startups and the tech and creative industries.

**#3** nationally for academic/  
research infrastructure  
(Baja)<sup>1</sup>

**64%** of high school graduates receive  
technical education<sup>2</sup>

## Workforce Composition, 2015

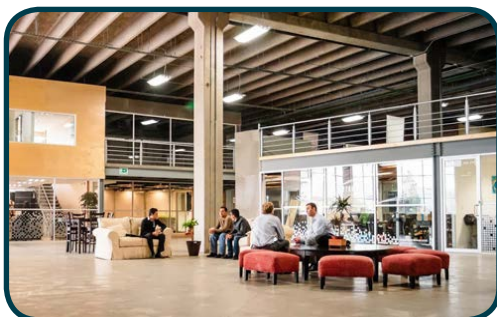


Source: National Survey on Employment and Occupation, 2016; National Institute of Statistics and Geography, 2016; National Survey on Employment and Occupation; Mexico City: INEGI

## Number of graduates by degree type, 2014-2015

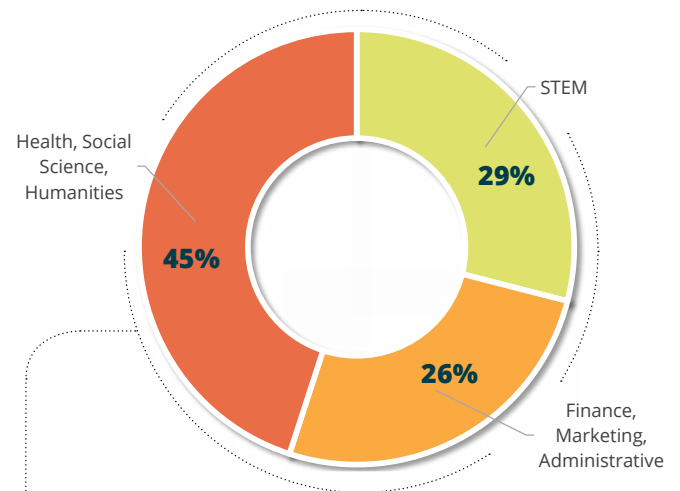
Degree type	Numer of graduates
High School	16,346
Bachelors	7,696
MA / PhD	777

Source: Mexican Ministry of Education, 2015. Education Statistics and Information Department, 2015. Education Indicators by State. Mexico City: SEP. Calculations by the UC San Diego Center for US-Mexican Studies.



BIT Center, Tijuana

## Field of Degree University level and higher<sup>3</sup>



## KEY UNIVERSITIES

- Autonomous University of Baja California (UABC)
- Center for Technical & Higher Education (CETYS)
- Ibero-American University Tijuana (IBERO)
- Tijuana Institute of Technology (ITT)
- Tijuana University of Technology (UTT)



**A DIVERSIFYING ECONOMY:** Tijuana is known historically as a global hub for advanced manufacturing – a reputation built by a talented workforce with established skills in manufacturing of medical devices, automotive parts and aerospace components. However, the **rise of the innovation cluster** in recent years is proof of Tijuana's diversifying economy. Global biotechnology giant **Thermo Fisher Scientific**, with a massive training center in San Diego County, cut the ribbon on its worldwide software center of excellence in Tijuana in September 2016. Additionally, **coworking spaces and incubators** such as BitCenter and MindHub foster the entrepreneurial spirit of locals who are positioned to benefit from Tijuana's proximity to California – the 5th largest economy in the world.<sup>3</sup>

# TIJUANA:

## TOURISM + QUALITY OF LIFE

Historically praised for its street tacos and nightlife, Tijuana has transformed into a burgeoning market for high-quality, locally sourced culinary experiences complemented by an up-and-coming craft beer scene. Leading this shift, the city is home to more than half of Baja's craft breweries and some of the region's most acclaimed chefs including Javier Plascencia and Martin San Roman. Top that off with an eccentric music and arts scene, Tijuana attracts weekend visitors and retirees from the U.S. who take part in a wide variety of activities including festivals, local artisan markets, shows and beachside fun.

### #8

New York Times must-visit destinations in the world in 2017<sup>1</sup>

### 90+

breweries in Baja<sup>2</sup>

### 120+

wineries in Baja<sup>3</sup>

### EAT + DRINK

- Puerto Nuevo (lobster village)
- Ceasar's Restaurante (restaurant)
- Los Remedios (restaurant)
- Mission 19 (restaurant)
- Verde y Creme (restaurant)
- Plaza Fiesta (entertainment plaza)
- Cerveceria Insurgente (brewery)
- Border Psycho (brewery)
- Mamut (brewery)
- Cerveceria Tijuana (brewery)
- Telefonica Gastro Park (food park)

### LISTEN + LEARN

- Centro Cultural de Tijuana (cultural center)
- Tijuana Inovadora (conference/festival)
- El Cubo (art gallery)
- El Foro (concert venue)
- Museo del Trompo (interactive museum)
- Museo de la Historia (history museum)
- Museo de las Californias (museum)
- Entijuanarte (music festival)
- Plaza Monumental (event venue)
- Avenida Revolucion (main street)
- Cinepolis 4DX (theater)

### TRAVEL + PLAY

- Valle de Guadalupe (wine country)
- Club Campestre de Tijuana (golf course)
- Toros de Tijuana (baseball)
- Xolos de Tijuana (soccer)
- Zonkeys de Tijuana (basketball)
- Galgodromo Caliente (racetrack)
- Casino Caliente (casino)
- Parque Morelos (park, zoo)
- Mundo Divertido (amusement park)
- Surfing spots in Playas de Tijuana
- La Bufadora (geyser)
- Paseo Rosarito Ensenada (cycling event)



Mission 19 Restaurant • Border Psycho Brewery • Ensenada, Baja California • Valle de Guadalupe wine country

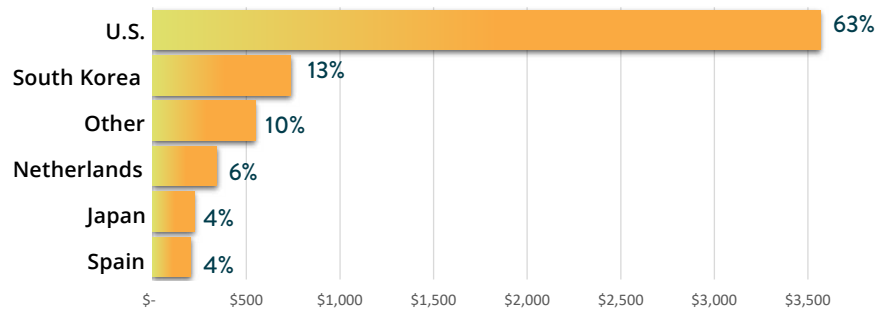


**QUALITY OF LIFE ON THE RISE:** Tijuana is one of Mexico's most affordable cities for an upscale lifestyle. It has been named a mecca of contemporary culture whose intense cultural diversity has given rise to the birth of new artistic and gastronomic tendencies.

# BAJA CALIFORNIA: GLOBAL CONNECTIVITY

## FOREIGN DIRECT INVESTMENT (FDI) + EXPORTS

### FDI by Country of Origin, 2012 - 2016



Source: Ministry of Economy 2012-2016; calculations by the UC San Diego Center for US-Mexican Studies.

**\$5.6B** Total Foreign Direct Investment, 2012-2016<sup>1</sup>

**EXPORTS**

**\$38B** total exports, 2015

**2<sup>nd</sup>** highest export value of all states in Mexico

Source: National Institute of Statistics and Geography, 2015.

### Top Industries for FDI, 2012 - 2016

Industry	Million USD
Transport manufacturing (cars, trucks and aerospace)	\$1,154
Computer and electronic product manufacturing	\$722
Electrical equipment, appliance, and component manufacturing	\$387
Plastics and Rubber Products	\$347
Machinery Manufacturing	\$333
Beverage and tobacco product manufacturing	\$262
Paper Manufacturing	\$186
Natural gas pipelines	\$437
Retail and Department Stores	\$174
Credit intermediation and related activities	\$190

Source: Ministry of Economy 2012-2016; calculations by the UC San Diego Center for US-Mexican Studies.



### FOREIGN DIRECT INVESTMENT:

Manufacturing industries account for **71 percent** of Baja California's total investments by foreign-owned companies. Global giants including BD, Samsung and Panasonic, among others manufacture innovative products in Tijuana that are exported all over the world.

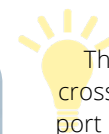
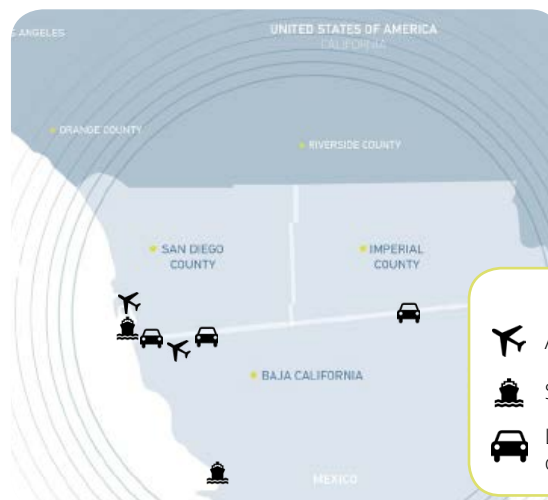
**CONNECTIVITY:** Tijuana's coastal geography and proximity to the U.S. border positions the region to expand trade and increase global connectivity. Among U.S.-Mexico border crossings, the Otay Mesa port of entry processes the third highest volume of trucks and value of commercial goods. The nearby Port of Ensenada has invested in infrastructure necessary for modern containerized shipping, while the San Ysidro border crossing is one of the busiest in the world. Many frequent border crossers are enrolled in trusted traveler programs which keep wait times down to under 15 minutes. In addition, Tijuana Airport passengers can enter the U.S. directly through the world's first cross-border airport terminal, the Cross Border Xpress.

### TIJUANA INTERNATIONAL AIRPORT<sup>1</sup>

- » More than 7 million passengers in 2017
  - » Fifth highest in Mexico
  - » 15 percent increase since 2016
- » 360 flights daily
- » Service to more than 32 destinations across Mexico

### CROSS BORDER XPRESS

- » World's first binational airport passenger terminal
- » In 2017, 1.9 million passengers have used the bridge<sup>2</sup>



The San Ysidro border crossing is the busiest land port of entry in the western hemisphere.

**137K** daily northbound border crossings<sup>3</sup>

**Key**

- Airport
- Seaport
- Land Port of Entry

Sources: <sup>1</sup>Passenger and Flight Arrival by Airport, 2016, Mexican Secretariat of Tourism with data obtained from Airports and Auxiliary Services & Secretariat of Communications and Transportations. <sup>2</sup>Pacific Airport Group, 2016, <sup>3</sup>US Department of Transportation, 2017.

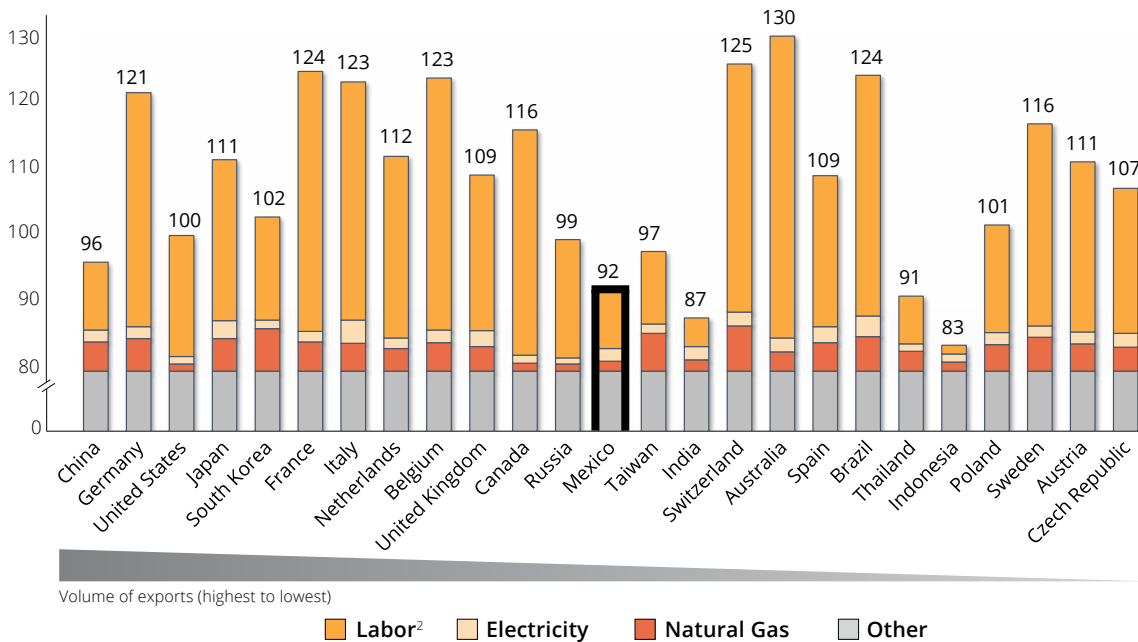
# TIJUANA: COST COMPARISON

Over the past decade, Mexico has risen to become a global manufacturing powerhouse - a reputation that can be largely attributed to its competitive wages, substantial productivity gains, energy costs advantages and stable exchange rates. China and Eastern Europe are historically recognized as top destinations for manufacturing - but slight gains in productivity in those regions have been offset by years of increasing wages and energy costs, allowing for shifts in the global manufacturing economy. In fact, Mexico now offers lower average manufacturing costs than China on a unit-cost basis, and foreign investment in Mexico is taking off.

## Comparing the Top 25 Export Economies, Boston Consulting Group, 2014

Manufacturing cost index, 2014 (US = 100)

In 2014, the Boston Consulting Group developed the Global Cost-Competitiveness Index - a tool for analyzing a changing map of manufacturing centers across the globe.<sup>1</sup> The results have driven many companies to rethink decades-old assumptions about sourcing strategies. Over the past decade, Mexico's manufacturing cost structure has improved the most as compared to the top 25 export economies in the world.



When compared to China, Mexico is estimated to have 13 percent lower labor costs and an overall **average direct manufacturing cost** that is four percentage points **cheaper than China**.

Sources: U.S. Economic Census; U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; International Labour Organization; Euromonitor International, Economist Intelligence; BCG analysis. Note: The index covers four direct costs only. No difference is assumed for other costs, such as raw-material inputs and machine and tool depreciation. Cost structure is calculated as a weighted average cost across all industries. <sup>2</sup>Adjusted for productivity.

Mexico has 10 Free Trade Agreements with 45 countries; more than any other nation.<sup>5</sup>



**REGIONAL MANUFACTURING:** Tijuana has emerged as a center for low-cost manufacturing, giving many U.S. companies the opportunity to shift operations closer to home. Companies that transition from global manufacturing to regional manufacturing benefit from simpler and more **efficient supply chain** processes, **fewer communication barriers** and improvements in **collaboration between teams**.

### Average annual wagger per worker by industry<sup>2</sup>

Aerospace:	\$12,912
Precision Instruments:	\$11,254
Audio & Video Equipment:	\$10,781
Semiconductors:	\$10,100
Medical Devices:	\$9,406
Electrical Equipment:	\$9,104
Automotive Parts:	\$8,209

Industrial Facility Construction Costs <sup>3</sup>			
Facility Size	35.000 sq. ft.	65.000 sq. ft.	100.000 sq. ft.
Basic Shell	\$26.00 - \$30.00	\$24.00 - \$29.00	\$21.00 - \$26.00
Semi-Finished	\$28.00 - \$32.00	\$26.00 - \$30.00	\$24.00 - \$31.00
Finished	\$29.00 - \$33.00	\$28.00 - \$32.00	\$26.00 - \$33.00

Industrial Facility Monthly Leasing Rates USD per sq. ft. <sup>4</sup>			
Class A		Class B	
Min.	Max.	Min.	Max.
\$0.42	\$0.48	\$0.36	\$0.41

Sources: <sup>1</sup> Boston Consulting Group, The Shifting Economics of Global Manufacturing, August 2014. <sup>2</sup>National Institute of Statistics and Geography (2014). Economic Census. Mexico City; INEGI with calculations by UC San Diego Center for US-Mexico Studies. <sup>3</sup>Survey: Construction Companies Established in Tijuana, Tijuana Economic Development Corporation, 2015. <sup>4</sup>IVEMSA, Mexican Manufacturing Costs, 2018. <sup>5</sup>ProMéxico, Trade agreements, 2018

# TIJUANA: RESOURCES + INCENTIVES

A standard set of local, state and federal incentives exist to attract businesses and support expansion. Incentives can be accessed through government economic development organizations. Below are a few examples of partners and trade organizations in Tijuana.

## GOVERNMENT



**PROMEXICO** is a federal government agency responsible for developing strategies to strengthen Mexico's participation in the international economy, supporting exporting firms and attracting foreign investment. ProMexico has an office in Tijuana.



**Secretariat of Economic Development (SEDECO)** reports to the Governor of Baja. SEDECO is involved in the permitting process, provides tax incentives to businesses and coordinates support from federal government entities.



**Secretaría de Desarrollo Económico de Tijuana (SEDETI)** is the municipal government entity in Tijuana which handles economic development matters. SEDETI engages in business attraction and retention and oversees local permitting and approval processes.

## NON-GOVERNMENT



**Tijuana Economic Development Corporation (DEITAC)** is a member-based organization founded more than 25 years ago that is made up of professional service providers. Overseen by a board elected by members, its primary focus is business attraction and retention within the manufacturing sector in Tijuana.



**CANIETI** is the National Chamber of the Telecommunications and Information Technology Electronics Industry, its primary focus is to promote economic growth, innovation and global competitiveness of the industry.



**CANACINTRA** is a corporate body governed by the Law of Business Chambers that seeks the integral and permanent development of the industrial companies of Tijuana through active and organized participation of the members of the sector.



**CANACO Tijuana** is the regional chapter of the National Chamber of Commerce which supports companies in the commerce, service and tourism sectors.



**Economic Development Council of Tijuana (CDT)** was founded in 1997 to provide strategic vision and leadership for long-term economic development priorities. It receives funds generated through the state payroll tax and re-grants to organizations and projects through a competitive and transparent process.

## BUSINESS INCENTIVES

### Tax Incentives in Baja California

- Employee training subsidies
- Payroll tax exemption (25 percent - 100 percent) from 1-5 years for new projects or significant expansions
- Water connection fees exemption (20 percent to 50 percent)
- Access to funds from a special fund for infrastructure for strategic companies

### National Tax Incentives

- "Maquiladora" partial income tax and business flat tax exemption and "safe harbor" transfer pricing rules
- 0% value-added tax for exporting activities
- Value-added tax exemption for the construction and/or sale of homes
- Immediate deduction of land for developers



**The information presented in this document is based on data analyzed by the Center for U.S - Mexican Studies. For more information and a full list of sources, please contact San Diego Regional EDC.**

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