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Employment Shifts In Ciudad Juárez: Beyond The Numbers

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Introduction

Ciudad Juárez, Chihuahua, situated along Mexico's northern border, sits directly across from El Paso, Texas, and has long been recognized as a key manufacturing hub within North America's industrial ecosystem. In 2024, Ciudad Juárez ranked as the fourth-largest manufacturing hub in Mexico with the manufacturing sector accounting for 63.3% of total employment, positioning the city as a crucial center for industrial production.¹ This significantly surpasses Mexico's national manufacturing employment share of 28.0%. This employment concentration underscores Ciudad Juárez's deep integration with global manufacturing shifts driven by global economic disruptions, shifting manufacturing demands, and evolving regulatory frameworks.

The COVID-19 pandemic introduced a unique period of turbulence, initially disrupting supply chains and slowing production across various industries. However, the aftermath of the crisis also facilitated a global supply chain reconfiguration, which often prioritized proximity to markets and positioned Ciudad Juárez as a favorable destination for manufacturing firms.

Beyond the pandemic's influence, several long-term trends continue to shape employment in Ciudad Juárez. Automation and advancements in manufacturing technology have also redefined labor requirements, reducing dependence on manual labor while increasing demand for highly skilled workers. The automotive sector, a cornerstone of the local economy, accounting for 12.8% of employment in 2024, is undergoing a profound transformation with the shift toward electric vehicles and new production techniques.

However, employment challenges in Ciudad Juárez are not solely dictated by technological and market-driven changes. Legislative developments in Mexico have significantly affected labor costs, particularly in border cities. In 2019, the federal government approved a program that substantially increased the minimum wage in the Northern Border Free Zone (Zona Libre de la Frontera Norte, ZLFN), causing it to reach the highest level observed in Mexico. While this policy aims to improve workers' living standards, it has also made inner Mexico a more attractive option for labor-intensive industries seeking lower operational costs. Policies such as these also make costly labor-saving technology more economical, prompting some companies to accelerate automation efforts to offset rising wages.

This white paper provides a comprehensive analysis of the recent and potential shifts in the workforce within Ciudad Juárez, as well as the factors driving these changes. By integrating publicly available sources, media publications, and anecdotal evidence, this white paper contextualizes employment trends within broader economic, policy, and industry developments. The analysis considers the impact of global economic disruptions, shifts in manufacturing demand, and regulatory changes affecting the local labor market. In doing so, this white paper aims to offer a nuanced perspective on the evolving employment landscape in Ciudad Juárez and its implications for the region's economic future.

¹ Ranking based on formal employment levels in Mexico's manufacturing sector.

Shifting Patterns and Recent Developments

Ciudad Juárez's industrial landscape has transformed over the past decade, shaped by the disruption of shifting wage structures, global economic trends, and evolving corporate strategies.

A key driver for this change is the rise in labor costs in Ciudad Juárez, which have become a defining factor in the region's evolving manufacturing landscape, influenced by both market forces and government policies. On one hand, sustained demand for skilled labor has intensified competition among employers, pushing wages higher as companies strive to attract and retain workers. On the other hand, policy decisions under the López Obrador administration, such as increases in the minimum wage and labor reforms aimed at improving workers' rights and benefits, have further contributed to rising costs.

These combined pressures are forcing companies, particularly those operating on thin profit margins, to reassess their strategies, whether through automation, supply chain restructuring, or relocation to lower-cost regions. As a result, the industrial composition of Ciudad Juárez is shifting, with higher-value and more capital-intensive operations gaining ground while traditional, labor-intensive sectors seek more affordable alternatives elsewhere.

“Christian Perez Giese, Executive Vice President and Director of the El Paso/Juárez office of CBRE, said that higher wages, which have been rising due to increasing demand and policy decisions under the López Obrador administration, are driving out lower-margin manufacturing operations; therefore, many of these companies, particularly in the automotive industry -such as wire harness manufacturers- are relocating in search of cheaper labor.”²

Perez Giese explained that this shift began over a decade ago when wages in China reached parity with those in Mexico, prompting some Asian firms to relocate even before COVID-19 disrupted global supply chains.

The COVID-19 pandemic, which emerged at the end of 2019, reshaped the global landscape, leaving disruptions in its wake for more than two years. The coronavirus was first identified in Wuhan, China, in November 2019. Wuhan, a key hub for optical electronics, automobile, and steel manufacturing, became the epicenter of a crisis that exposed vulnerabilities in global supply chains.

The impact of the pandemic extended beyond China, significantly disrupting manufacturing operations in Mexico, particularly in the automotive industry. As supply chains were strained and production was halted, longstanding challenges within the sector were exacerbated. In Mexico, the automotive industry's share of employment remained stagnant from 5.4% in 2019 to 5.5% in 2024. However, Ciudad Juárez, a major automotive manufacturing center, experienced a decline in its automotive employment share from 14.1% in 2019 to 12.8% in 2024.

At the same time, the pandemic introduced significant disruptions to the broader manufacturing sector, reshaping production patterns and employment dynamics. While some sectors were forced to halt operations temporarily, others adapted to increased demand in industries such as medical equipment and personal protective gear. In Ciudad Juárez, some maquiladoras adjusted their production lines to manufacture disposable face masks and medical supplies, with companies like BOSCH pivoting operations to support both employees and the broader industry.³

Not only has COVID-19 transformed the manufacturing sector, but the automotive industry's progressive shift from internal combustion engines to electric vehicles has also driven a structural transformation. This shift has impacted local employment as original equipment manufacturers (OEMs) reduced demand for certain auto parts. Another factor creating these employment shifts in the automotive subsector is the conclusion of specific product life cycles and the absence of renewed contracts, particularly after 2023.

² CBRE is a global firm specializing in commercial real estate services and investments.

³ Robert Bosch GmbH. "Coronavirus: Bosch Puts Fully Automated Mask-Production Lines into Operation." Bosch Media Service, May 15, 2020. <https://www.bosch-presse.de/pressportal/de/en/coronavirus-bosch-puts-fully-automated-mask-production-lines-into-operation-211776.html>.

Data and Methodology

To better assess the impact of these employment shifts, the Hunt Institute analyzed formal employment figures in Mexico, focusing on non-farm sectors.⁴ Employment figures include both permanent and temporary jobs, offering a complete understanding of Mexican formal non-farm employment. To enhance readability, all numerical data in the report's tables were rounded up to the nearest 500.

This report includes analyses of eight non-farm employment sectors. The agricultural sector, the ninth sector, is excluded from this report because its workforce is highly seasonal and subject to weather-related fluctuations, making it an unreliable indicator of employment trends.

To assess long-term and short-term changes in employment, this report compares the latest annual data available from 2024 with three reference periods: 2018, for reference of levels before the doubling of minimum wage levels in the ZLFN; 2019, representing pre-pandemic levels; and the period from 2023 to 2024, to understand the most up-to-date year-over-year (YoY) changes. These comparisons provide insights into employment shifts driven by the pandemic and its recovery, minimum wage adjustments, automation, and other market dynamics.

An ARIMA (Autoregressive Integrated Moving Average) model using employment data from January 2003 to December 2018 was used to forecast employment from January 2019 to February 2025. This methodology allowed us to capture trends and patterns in the data before the increase in the daily minimum wage at the ZLFN or COVID-19, providing a basis for our projections.

⁴ Data used is from the Mexican Social Security database.

Comprehensive Employment Analysis of

8

formal non-farm
employment sectors in
Mexico

Using three key
reference periods:

2018

2019

2023

As of 2024, Ciudad Juárez was
ranked the

4th

largest manufacturing hub in
Mexico.

Legislative Development's Impact

Map 1. Northern Border Free Zone (ZLFN)



Source: Hunt Institute map based on ZLFN boundaries established by Mexico's Secretaría de Economía, effective January 1, 2019.

Map 1 illustrates the ZLFN, which includes 45 municipalities from northern Mexico, including Ciudad Juárez.⁵ The minimum daily wage level for the ZLFN doubled from MXN 88.36 (\$4.59) in 2018 to MXN 176.72 (\$9.18) in 2019.⁶ In contrast, the rest of Mexico experienced a more moderate increase, during the same period with the daily minimum wage rising from MXN 88.36 (\$4.59) to MXN 102.68 (\$5.33), reflecting a 16.2% increase.⁷

5 In 2020 and 2021, the municipalities of San Quintín and Ensenada were incorporated into the ZLFN. For more details, https://www.gob.mx/cms/uploads/attachment/file/839362/Informe_de_Resultados_ZLFN_UPPE_2023_VFF.PDF

6 The average end-of-month FIX exchange rate for each year was obtained from the Central Bank of Mexico database to convert nominal salaries from MXN to USD. The numbers in parentheses are in USD.

7 The Northern Border Free Zone (Zona Libre de la Frontera Norte) took effect on January 1, 2019, in 43 municipalities across Baja California, Sonora, Chihuahua, Coahuila, Nuevo León, and Tamaulipas. It establishes higher minimum wages than those in the rest of Mexico.

Table 1. Historical Minimum Wage per Day in Mexico and in ZLFN

	A Mexico MXN (USD)			B YoY Δ% (MXN)	C Ciudad Juárez MXN (USD)			D YoY Δ% (MXN)	E Ratio C/A	2018 vs. 2025 YoY % in MXN	
2018	MXN	\$88.36	(\$4.59)	10.4%	MXN	\$88.36	(\$4.59)	10.4%	1.00		
2019	MXN	\$102.68	(\$5.33)	16.2%	MXN	\$176.72	(\$9.18)	100.0%	1.72		
2020	MXN	\$123.22	(\$5.73)	20.0%	MXN	\$185.56	(\$8.63)	5.0%	1.51		
2021	MXN	\$141.70	(\$6.99)	15.0%	MXN	\$213.39	(\$10.52)	15.0%	1.51		
2022	MXN	\$172.87	(\$8.59)	22.0%	MXN	\$260.34	(\$12.94)	22.0%	1.51		
2023	MXN	\$207.44	(\$11.69)	20.0%	MXN	\$312.41	(\$17.61)	20.0%	1.51		
2024	MXN	\$248.93	(\$13.58)	20.0%	MXN	\$374.89	(\$20.45)	20.0%	1.51		
2025	MXN	\$278.80	(\$13.57)	12.0%	MXN	\$419.88	(\$20.43)	12.0%	1.51		

Note: Ciudad Juárez is located within the ZLFN. All figures are expressed in MXN. All figures in parentheses are equivalent amounts in USD based on the average end-of-month FIX exchange rate for each year.
Source: Hunt Institute calculations.

Columns A to D of Table 1 show that the daily minimum wage continued to rise in the following years, reaching MXN 419.88 (\$20.43) by 2025 in the ZLFN, compared to MXN 278.80 (\$13.57) in the rest of Mexico. As a result, between 2018 and 2025, the cumulative wage increase in the ZLFN was 375.2%, significantly outpacing the 215.5% increase in the rest of Mexico.

Column E of Table 1 shows that in 2018, the daily minimum wage was the same across Mexico (i.e., the ratio between the minimum wage levels of ZLFN and the rest of Mexico was 1.00). In 2019, the daily minimum wage in the ZLFN doubled, while the rest of Mexico exhibited only a 16.2% increase. As a result, the daily minimum wage in the ZLFN was 1.72 times higher than in inner Mexico. From 2020 to the following years, wages continued to increase at the same rate for both regions (columns B and D). Currently, in 2025, the daily minimum wage in ZLFN is 1.51 times higher than in the rest of Mexico.

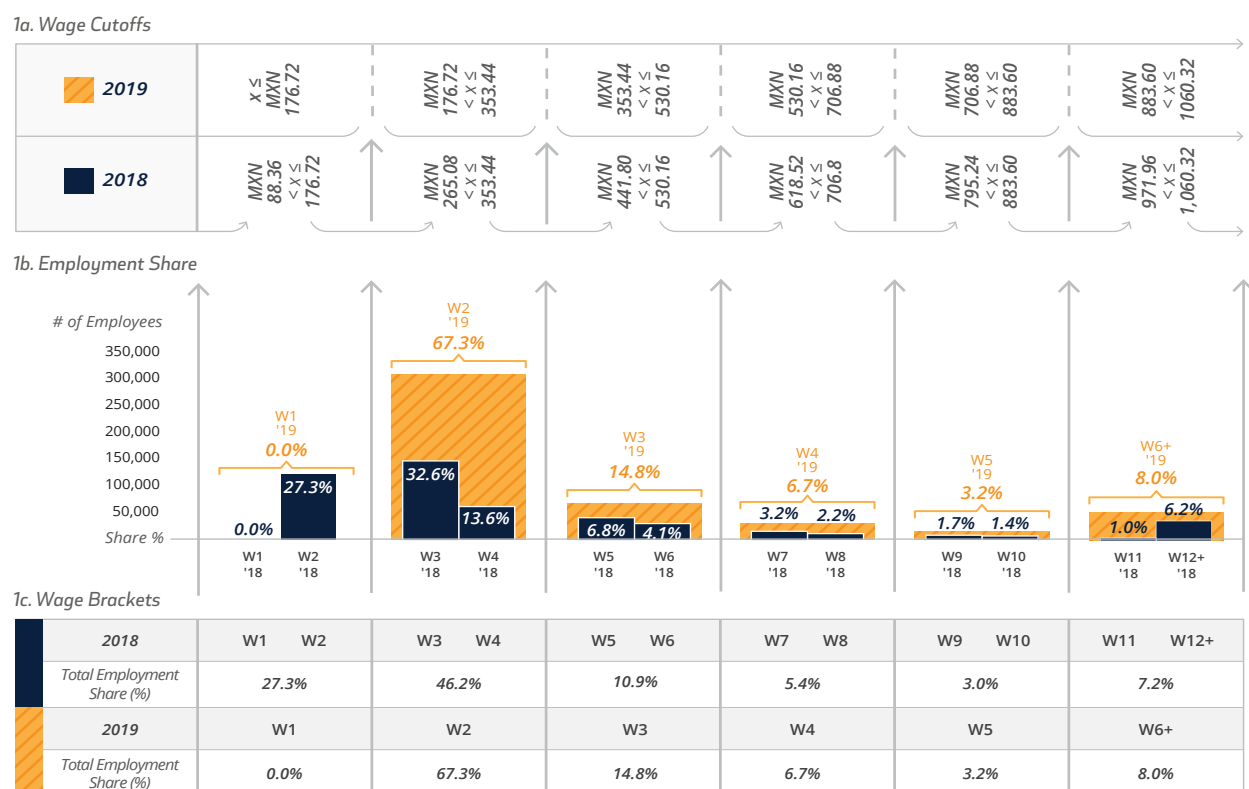
These rising labor costs have prompted some maquiladoras to relocate portions of their operations to other facilities in Central and Southern Mexico, where wages remain lower at MXN 278.80 (\$13.57) in 2025, creating a daily wage gap of MXN 141.08 per day (\$6.87) compared to the ZLFN.

As a result, employers like Lear Corporation took steps to reduce costs by relocating production because of the increasing costs in Ciudad Juárez due to the higher salaries in the ZLFN.⁸ In one of its 2024 conference calls, Lear stated that increasing labor costs in Mexico prompted a shift in operations from the border region to inner Mexico, where wages are lower, or to Central America.

“During its third-quarter earnings call in 2024, Lear’s top executives outlined the company’s strategy: “To offset labor inflation, we continue to aggressively shift our wiring operations to new lower-cost manufacturing locations. We are leveraging our footprint in North Africa to supply the European markets. In North America, we are moving more wire operations to Honduras. Today, our headcount is about 60% in Mexico and about 40% in Honduras. We expect a shift to 40% in Mexico and 60% in Honduras over the next couple of years. Our focus on product process innovation, combined with restructuring our footprint to reduce excess capacity, has us well positioned for any production environment.”

⁸ “Lear Corporation (LEA) Q3 2024 Earnings Conference Call Transcript,” Conference Call Transcripts, October 24, 2024, <https://conferencecalltranscripts.org/summary/?id=549962&pr=true>.

Figure 1. Payroll Share Across Wage Brackets in Ciudad Juárez, 2018 vs. 2019



Note: The digit to the right of "W" denotes the number of times the daily minimum wage level is for the corresponding year.
Source: Hunt Institute calculations.

Figure 1 comprises three subfigures. The first one, "1a. Wage Cutoffs," shows the corresponding wage cutoffs for 2018 and 2019, respectively, based on multiples of the daily minimum wage. As you can observe from this subfigure, some of these cutoffs are equivalent across these two years. The second subfigure, "1b. Employment Share", exhibits the wage brackets that are within the wage cutoffs. For instance, the bracket below the 2019 W1 cutoff represents 0.0% that year. The third subfigure, "1c. Wage Brackets", shows the employment share for every two brackets in 2018 and for every bracket in 2019 to make these shares comparable.

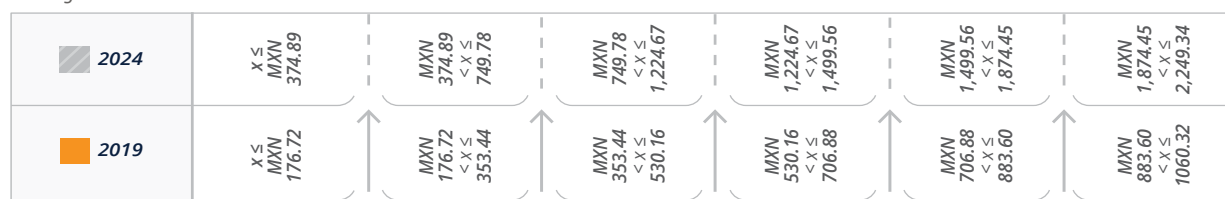
Given that in 2019 the minimum wage level doubled, wage bracket cutoffs increased in width by a factor of two. In 2019, employers with workers earning between the minimum wage (MXN 88.36) and twice the minimum wage (MXN 176.72) in 2018, represented in the second blue bar from left to right in Figure 1b, were forced to either have their salary doubled (at the least) or find an alternative option as they no longer met the 2019 minimum wage of MXN 176.72. As expected, this shift led to a negligible share of workers in the 2019 W1 bracket and a significant concentration in the 2019 W2 bracket. The share of workers in the 2019 W1 bracket fell to 0.0%, while 67.3% were in the 2019 W2 bracket, likely reflecting the impact of the wage bracket adjustments. (These wage changes are pictured in Tables 1A and 1B in the Appendix).

From 2018 to 2019, the manufacturing industries that experienced the most substantial growth in the 2019 W2 wage bracket (i.e., those with the largest share of workers earning between one and two times the 2018 minimum wage) included electronics, auto parts, textiles, medical equipment, and communication devices.

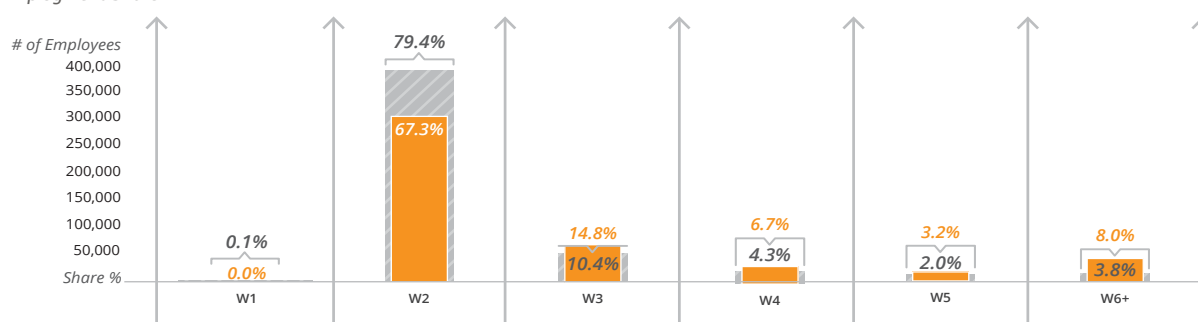
The wage distribution shift in these industries could also potentially relate to the increasing role of automation and the corresponding demand for more highly skilled workers. As industries integrate advanced technologies, the labor market may be adjusting to favor employees with specialized skills, leading to upward mobility in wage distribution. However, this factor requires further research.

Figure 2. Payroll Share Across Wage Brackets in Ciudad Juárez, 2019 vs. 2024

2a. Wage Cutoffs



2b. Employment Share



2c. Wage Brackets

	2019	W1	W2	W3	W4	W5	W6+
Total Employment Share (%)		0.0%	67.3%	14.8%	6.7%	3.2%	8.0%
	2024	W1	W2	W3	W4	W5	W6+
Total Employment Share (%)		0.1%	9.4%	10.4%	4.3%	2.0%	3.8%

Note: The digit to the right of "W" denotes the number of times the daily minimum wage level is for the corresponding year.
Source: Hunt Institute calculations.

The doubling of wages for workers in the lowest wage brackets (i.e., production workers) narrowed the pay gap between them and higher-level workers (i.e., middle-management workers), prompting demands for wage increases across higher wage levels. These wage increases extended beyond the entry-level positions, triggering a domino effect that contributed to growth of employment share in upper wage brackets, as observed in Figure 1c.

Despite these substantial wage increases, total employment in Ciudad Juárez continued to rise, increasing from 450,000 in 2018 to 458,000 in 2019.⁹

The wage structure has continued to shift since the policy adjustment went into effect in 2019. The engrossment of workers into superior wage brackets in 2019 decreased in the following years with potential factors such as COVID-19, massive layoffs, and reconfiguration of supply chains. The lower brackets absorbed a large proportion of the upper brackets that shrank during these years. As an example, while the W2 bracket share increased from 67.3% to 79.4% between 2019 and 2024, the W6+ bracket share decreased from 8.0% to 3.8%. Nevertheless, by 2024, total employment levels had surpassed pre-pandemic figures from 2019.

Rising costs are felt by many employers in Ciudad Juárez. One executive for a Chinese manufacturing company in Ciudad Juárez noted they have had a widespread impact across their operations. He explained that the effects extend beyond operative workers, as every minimum wage increase requires salary adjustments across all levels to maintain internal equity and workforce stability. Moreover, he pointed out that employee benefits are also tied to the minimum wage, further contributing to rising costs and adding pressure on the company's financial structure.

Despite these financial pressures, this company has taken steps to optimize labor costs. As a result, instead of contracting with third-party recruitment firms, the company shifted to hiring employees directly. This approach has allowed it to lower costs and reduce turnover, contributing to a more stable and committed workforce.

⁹ Employment figures in this report exclude the agriculture sector due to its seasonal fluctuations.

Employment Trends

Total employment in Mexico reached 19.7 million jobs in 2019, reflecting an increase of 430,000 jobs (2.2%) compared to 2018 levels. In Ciudad Juárez, employment reached 458,000 jobs in 2019, exhibiting a growth of 8,000 jobs (1.8%) from the previous year.

In 2024, total employment in Mexico was just over 21.6 million jobs, an increase of 1.9 million jobs (9.8%) compared to 2019. Employment growth was also strong in the previous year, rising by nearly half a million jobs (2.2%) from 2023.

That same year, total employment in Ciudad Juárez was approximately 496,000 jobs. Since 2019, the city has added more than 38,000 jobs, reflecting an 8.3% growth rate over this five-year period. However, in comparison to 2023, employment declined by nearly 13,000 jobs or -2.6%. While six out of the eight employment sectors experienced YoY growth during this period, the manufacturing and construction sectors registered job losses between 2023 and 2024 of -5.3% and -2.3%, respectively.

Table 2. Employment in Mexico and Ciudad Juárez (Δ%)

Employment Sectors	Mexico			Ciudad Juárez		
	2018-2019	2019-2024	2023-2024	2018-2019	2019-2024	2023-2024
Extractive Industries	-1.4%	0.5%	-0.6%	-15.1%	106.3%	48.0%
Manufacturing	2.3%	9.5%	0.3%	1.5%	4.4%	-5.3%
Construction	-1.6%	12.2%	1.8%	9.9%	24.3%	-2.3%
Electricity Industry and Drinking Water Supply	0.7%	7.0%	2.0%	2.5%	24.4%	3.9%
Retail	2.7%	14.5%	3.3%	1.9%	20.4%	4.3%
Communications and Transportation	5.2%	31.7%	5.8%	8.1%	27.1%	2.4%
Services for Businesses, Individuals and the Household	2.8%	0.1%	2.4%	-1.2%	3.7%	2.3%
Social and Community Services	1.5%	10.1%	2.4%	1.1%	14.7%	2.3%
TOTAL	2.2%	9.8%	2.2%	1.8%	8.3%	-2.6%

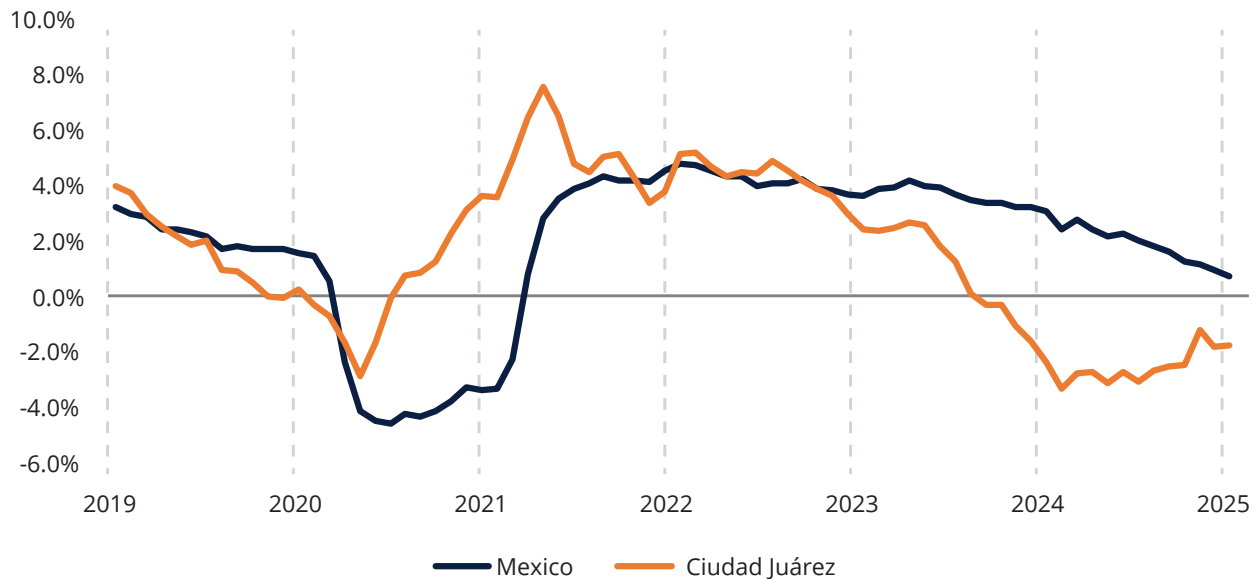
Table 3. Employment in Ciudad Juárez (Δ)

Employment Sectors	Ciudad Juárez		
	2018-2019	2019-2024	2023-2024
Extractive Industries	-10	100	50
Manufacturing	4,500	13,000	-17,500
Construction	1,500	4,000	-500
Electricity Industry and Drinking Water Supply	50	600	100
Retail	900	10,000	2,500
Communications and Transportation	1,500	5,500	600
Services for Businesses, Individuals and the Household	-500	2,000	1,000
Social and Community Services	300	3,500	600
TOTAL	8,000	38,000	-13,000



Source: Hunt Institute calculations.

Figure 3. Monthly Employment in Mexico and Ciudad Juárez through February 2025 (YoY, $\Delta\%$)



Source: Hunt Institute calculations.

Figure 3 shows that in 2019, employment decelerated in both Mexico and Ciudad Juárez, which led to a shorter dip for Ciudad Juárez in 2020 when COVID-19 hit. Total employment in Ciudad Juárez, however, continued to grow at an accelerating pace during the COVID-19 pandemic until 2021, after which YoY growth began to slow. By late 2023, employment growth turned negative and has remained so through February 2025.

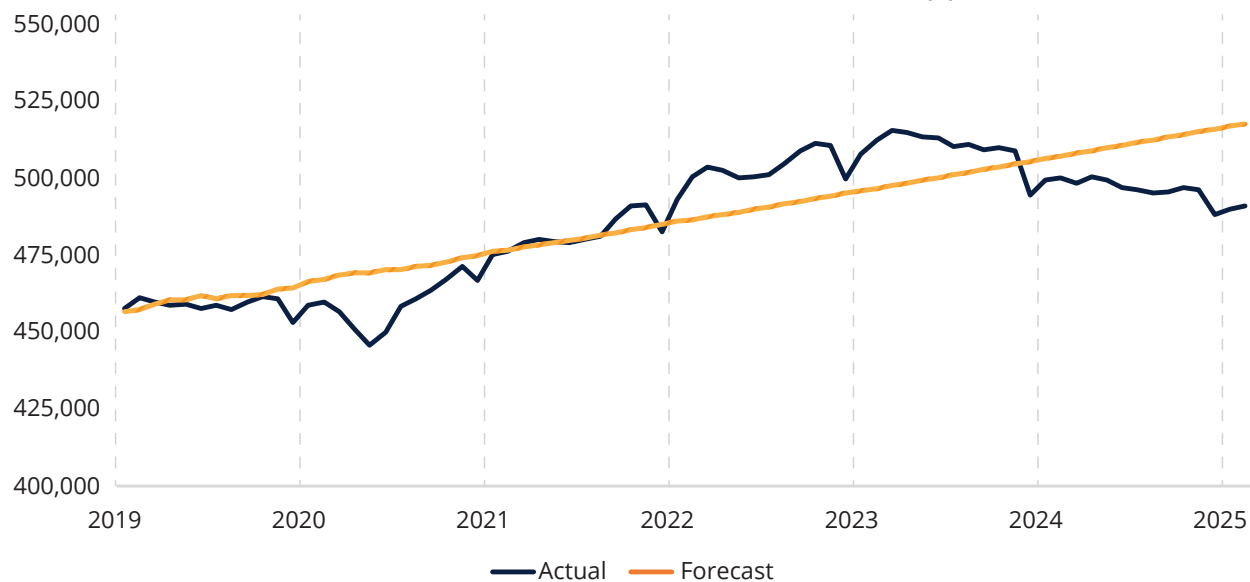
The following analysis estimates what employment levels might have been if the policy and economic shocks of recent years, including the minimum wage increase and COVID, had not occurred. The following graph, Figure 4, compares actual employment with the forecasted values, based on projections using data from January 2003 to December 2018.

After the minimum wage doubled in 2019 in Ciudad Juárez, growth in total employment slowed, in part due to this change. However, this dip quickly reversed in Ciudad Juárez in 2020 due to a surge in total employment driven by a prioritization of location over cost and increased demand for computers and medical device production, both as a result of the pandemic. The increase in the daily minimum wage alongside the COVID-19 pandemic widened the gap between the actual and forecasted employment levels over time. During this employment surge, between early 2021 and late 2023, the forecasted total employment exceeded the observed employment.



"In 2019, the daily minimum wage in the ZLFN doubled, while the rest of Mexico exhibited only a 16.2% increase. Currently, in 2025, the daily minimum wage in ZLFN is 1.51 times higher than in the rest of Mexico."

Figure 4. Monthly Employment Forecast in Ciudad Juárez through February 2025 (Δ)



Note: The total employment forecast for Ciudad Juárez from January 2019 to February 2025 was estimated using an ARIMA model based on historical data from January 2003 to December 2018. This approach captured trends and patterns before the impact of the ZLFN minimum wage increase and COVID-19, forming the basis for projections. Source: Hunt Institute calculations.

Since 2024, the gap between forecasted employment levels and the actual employment levels in the city seems to be widening once more, likely driven by further increases in the minimum wage and the relocation of manufacturing firms.

These facts suggest that, had no policy adjustments or health disruptions occurred, employment levels would likely have followed a stronger upward trend, as shown in the forecasted employment levels in Figure 4.

In Ciudad Juárez, total employment increased by 8,000 jobs, or 1.8%, between 2018 and 2019. The manufacturing sector contributed the most to this increase, with 4,500 jobs, or 1.5%, followed by the transportation, communication, and construction sectors, each adding 1,500 jobs, or 8.1% and 9.9%, respectively. During this period, job losses were recorded only in the services for business, individuals, and households sector, which declined by 500 jobs, or -1.2%, and the extractive industries sector, which lost less than 100 jobs, or -15.1%.

Members of Desarrollo Económico de Ciudad Juárez (Economic Development of Ciudad Juárez), a nonprofit organization of business leaders in the region, said the manufacturing sector, particularly export manufacturing, has been hit the hardest in recent months. With demand declining and labor costs rising, companies are making difficult decisions to remain competitive.

“The impact has been most pronounced in operational and technical roles, where layoffs have surged. At the heart of this trend is the loss of key contracts, forcing firms to scale back their workforce,” they stated.

Between 2019 and 2024, total employment levels in Ciudad Juárez increased by more than 38,000 jobs, or 8.3%. The manufacturing sector accounts for the largest increase, adding 13,000 jobs, or 4.4%, followed by retail, which contributed nearly 10,000 jobs, or 20.4%. All other sectors also registered consistent YoY growth during this period. This increase is partly attributed to the supply chain reconfiguration, which brought more companies to the region.

Although employment levels in 2024 surpassed pre-pandemic levels from 2019, Ciudad Juárez experienced a YoY decline in total employment between 2023 and 2024. The manufacturing sector lost roughly 17,500 jobs, or -5.3%, during this period, with the remaining sectors absorbing some of these losses. In net, total employment fell by 13,000 jobs, or -2.6%. Erika Donjuan Callejo, economist and director of Tecmilenio Juárez campus, vice-rectors Office for the Northern Zone, noted that the retail sector may have absorbed approximately 5,000 of the jobs lost in manufacturing as increased commercial activity in the city has driven demand for retail-related employment.

In this regard, INDEX Juárez executives, representing the maquiladora industry in Ciudad Juárez, said some of its members are increasingly concerned about job losses in the maquiladora industry, citing a lack of clear solutions or support mechanisms to sustain employment levels. Many companies are struggling to balance competitiveness with workforce stability, and without targeted government or industry-led initiatives, maintaining current employment levels becomes a challenge.

To better understand these trends, it is helpful to examine changes in specific industries over two key periods: 2018 versus 2019 and 2019 versus 2024.

During the 2018-2019 period, the electronics manufacturing industry added 3,500 jobs, or 5.8%, making it the industry with the largest employment growth in Ciudad Juárez during this period. Other industries that also exhibited significant growth during this period were the manufacturing of plastic products, with 1,200 jobs, or 9.7%, and rubber products, adding 1,200 jobs or 270.4%, the latter most likely due to an increased demand for medical goods.

Among these industry trends, the medical equipment industry experienced the most significant expansion in Ciudad Juárez, adding more than 12,500 jobs, a 41.2% increase, between 2019 and 2024. This growth was driven primarily by the urgent demand for essential medical equipment and life-saving devices rather than elective surgical tools. The COVID-19 pandemic highlighted the critical need for ventilators, diagnostic equipment, and personal protective gear, prompting

an increase in production capacity across specialized manufacturing hubs. Ciudad Juárez became a key player in this expansion as it houses a diverse portfolio of medical equipment, including respiratory devices, infusion pumps, surgical instruments, and implantable medical devices.

Two other industries also demonstrated significant employment growth between 2019 and 2024. The computer manufacturing industry experienced a remarkable surge, adding 9,500 jobs, or 238.4%. This expansion was driven in part by the strategic growth of major global players, Pegatron and Foxconn, both of which strengthened their operations in the city. Foxconn, known for its role in electronics and computer manufacturing, expanded its capacity to meet growing market demand. Pegatron, a key supplier of AI server racks and consumer electronics, undertook a significant expansion initiative that began in 2022 and culminated in the inauguration of a new facility in late 2023.

“The 2022 Foxconn expansion in San Jerónimo is accounting for quite a bit of that increase of computer production and related jobs,” said Jerry Pacheco, president of the Border Industrial Association, an industrial advocacy organization in New Mexico that focuses on improving the business environment in the region.

Building on this trend, Perez Giese said the pandemic accelerated corporate decision-making, fueling a surge in industrial space absorption, particularly among Taiwanese electronics manufacturers.

Table 4. Top Industries by Change in Employment in Ciudad Juárez

Employment Industries	Ciudad Juárez		
	2018-2019	2019-2024	2023-2024
Manufacturing			
Computer Manufacturing and its Components		9,500	4,500
Medical Equipment Manufacturing		12,500	1,500
Manufacturing of Other Unclassified Manufactured Articles and Equipment			1,000
Electronics	3,500		
Plastic Products	1,200		
Rubber Products	1,200		
Construction			
Infrastructure and Public Works		4,500	

Source: Hunt Institute calculations.



“Unlike the departing firms, these companies are not only remaining in Juárez but are expanding their footprint with more sophisticated manufacturing operations. Their presence has driven much of the industrial space absorption since 2020,” he added.

Meanwhile, the construction industry—spanning infrastructure projects and public works—demonstrated robust growth, adding more than 4,500 jobs, or 74.9%, between 2019 and 2024. This growth phase coincided with a wave of industrial development in Ciudad Juárez, driven by nearshoring strategies and manufacturing expansions. The demand for new industrial facilities surged as companies sought to relocate or expand their operations closer to the U.S. market.

Perez Giese said a challenge is securing adequate power supply, which has further delayed their production ramp-up and hindered some projects.

During the 2018-2019 period in Ciudad Juárez, the industry that exhibited the most significant employment losses was the manufacturing of electric systems for automobiles, which lost 3,000 jobs or 6.0%. Other industries, such as the manufacturing of home appliances and their components and the manufacturing of textiles, also suffered substantial losses, with declines of 1,000 jobs or 10.5% and 900 jobs or -2.8%, respectively.

Even though manufacturing activities increased from 2019 to 2024, some industries reported employment declines in Ciudad Juárez. Textiles led these losses with 8,000 jobs, showing a -31.3% decline; electric systems manufacturing for automobiles, with almost 5,000

jobs lost or -10.8%; and electrical parts and systems manufacturing for companies, which registered a decline of 3,000 jobs or -4.7%. During this period, some companies automated their processes.

For many decades, the automotive industry was a traditional pillar of Ciudad Juárez’s economy, but during this period, it experienced substantial job losses. APTIV, a Tier 1 supplier for the automotive sector, reduced its workforce in 2023 due to production adjustments and the termination of one of its contracts. The company’s spokesperson explained that clients were demanding a lower volume of production, leading to layoffs despite APTIV’s long-standing role as a major employer in the region.

Akwel, a French automotive supplier specializing in fluid management, mechanisms, and structural parts for electric vehicles, announced workforce reductions in 2024. The company cited a decline in global automotive production and the industry’s transition toward electric mobility as primary reasons for the layoffs. These factors have led to decreased demand for certain traditional automotive components, prompting Akwel to adjust its operations accordingly.

Beyond the automotive sector, the electronics industry in Ciudad Juárez also faced challenges in 2024. Keytronic, a contract manufacturer serving the automotive, aerospace, and military sectors, implemented layoffs.

Some maquiladoras in Ciudad Juárez did not implement formal layoffs but instead chose not to renew temporary or fixed-term contracts, reducing their workforce without officially terminating employees.

Table 5. Bottom Industries by Change in Employment in Ciudad Juárez

Employment Industries	Ciudad Juárez		
	2018-2019	2019-2024	2023-2024
Manufacturing			
Textiles	-900	-8,000	
Manufacturing of Communication Equipment			-3,000
Electrical Parts and Systems Manufacturing for Companies		-3,000	-11,000
Electric Systems for Automobiles	-3,000	-5,000	-3,500
Home Appliances and its Components	-1,000		

Source: Hunt Institute calculations.



Recent Employment Trends in Ciudad Juárez

This analysis focuses on job increases across industries between 2023 and 2024 to capture the most recent shifts in employment in Ciudad Juárez.

The most recent job increases, between 2023 and 2024, occurred in computer manufacturing and its components, which added 4,500 jobs, marking a 51.1% rise. Medical equipment manufacturing followed with an increase of 1,500 jobs, reflecting a 3.9% expansion. Manufacturing, assembly, and/or repair of other unclassified manufactured articles and equipment added 1,000 jobs, showing an 18.2% increase.

This period also registered new operations and expansions in Ciudad Juárez, particularly in the medical and electronics sectors. Forefront Medical Technology, a Singaporean contract manufacturer specializing in medical devices, established operations in the city, though it has not disclosed investment figures or job projections.¹⁰ Ambu, a Danish company, initiated operations at full capacity in 2023 and focused on producing single-used endoscopes and anesthesia-related parts. As production scales up, Ambu is expected to generate between 2,000 and 3,000 jobs.¹¹ Meanwhile, U.S. manufacturer Becton Dickinson (BD) invested \$80 million in a sterilization plant, which will create 50 jobs in its initial phase.

The electronics sector, focusing on computers and their components, also expanded significantly, with Pegatron strengthening its presence in Ciudad Juárez through a new plant dedicated to consumer electronics, including computers and accessories. The Taiwanese company invested \$200 million in this project, which is expected to create 1,500 jobs. Moreover, Foxconn reaffirmed in 2023 its commitment to optimizing supply chains, enhancing infrastructure, and collaborating with the state government to develop programs aimed at cultivating local talent for its campus on the outskirts of Ciudad Juárez, in San Jerónimo, where the company manufactures computers and other electronics and components for other companies as well.

On the other hand, the industries experiencing the largest declines during the 2023 and 2024 period included the manufacturing of electrical parts and systems for companies, which lost 11,000 jobs, or -14.8%; the manufacturing of electrical parts and systems for automobiles, which recorded a reduction of almost 3,500 jobs, or -8.0%; and the manufacturing of communications equipment, which declined by 3,000 jobs, or -16.6%. During this period, layoffs in the automotive industry continued in Ciudad Juárez as companies implemented cost reduction programs, faced the loss of contracts, and advanced automation efforts.

¹⁰ "Forefront Medical Technology Adds Mexico Manufacturing Facility," Forefront Medical Technology, January 9, 2024, <https://forefrontmedical.com/forefront-medical-technology-adds-mexico-manufacturing-facility/>.

¹¹ Ambu, "Grand Opening of New Ambu Plant in Mexico," press release, October 12, 2022, <https://www.ambu.com/Files/Files/Ambu/Investor/News/English/2022/Grand-opening-of-new-Ambu-plant-in-Mexico-press-release.pdf>.

Prospecting in Employment

The employment shifts analyzed in this white paper could have a far-reaching impact on job creation in Ciudad Juárez, particularly as industries adapt to evolving global and regional dynamics. Moreover, changes in global politics, including potential retail policy adjustments by the U.S., could introduce new challenges and opportunities for manufacturers operating in Ciudad Juárez. Industry experts and economists believe the employment challenges might remain.

Guillermo Rosales Zárate, Executive President of the Mexican Association of Automobile Distributors (AMDA), stated that the automotive industry is undergoing significant changes, not only in Mexico but worldwide.

He explained that OEMs now have greater production capacity than sales demand, leading to an oversupply of stock. As a result, manufacturers are reducing the number of units produced each year, which has led many to cut their workforce and decrease purchases of auto parts and components from suppliers globally.

This trend is echoed by major Tier 1 suppliers such as Bosch, which operates manufacturing sites in Mexico, including Ciudad Juárez. As Bosch CEO Stefan Hartung noted at the IAA Transportation retail fair in Hanover in 2024, the "demand on the car market (globally) is lower than the industry expected five years ago."

Meanwhile, Jesús Manuel "Thor" Salayandía, coordinator of Bloque Empresarial Fronterizo (Border Business Bloc) in Ciudad Juárez, noted that the local economy is closely tied to foreign companies manufacturing in Mexico. Consequently, any global shifts directly impact employment in the region.

"We need to develop an SME industrial policy in Mexico to provide small and medium enterprises with access to capital, affordable loans, and technology. We can look to China as an example—this country promotes technology transfer, acquires machinery from foreign investors, and fosters the development of new enterprises. Once the foreign investor exits, a Chinese SME remains with the knowledge, capability, and technology to replicate the process at a lower cost," Salayandía explained.


Made in China (MIC) 2025, launched by Prime Minister Li Keqiang in 2015, aims to modernize China's industrial capabilities by reducing reliance on foreign technology and strengthening domestic production in high-tech industries such as robotics, aviation, and new energy vehicles.

Lastly, developing and retaining talent in Ciudad Juárez is key to expanding high-paying employment and strengthening the local economy.

Erika Donjuan Callejo, economist and director of Tecmilenio Juárez campus, vice-rectors Office for the Northern Zone, underscores the ongoing challenge of meeting companies' demand for bilingual engineers—professionals who are often reassigned to international roles or other company locations, leaving critical vacancies in the local workforce. Beyond technical expertise, she highlights the increasing importance of soft skills, emphasizing that as industries evolve, adaptability and interpersonal abilities are becoming just as essential as technical knowledge.

As industries grow, demand for skilled professionals remains high, yet many are relocated elsewhere, leaving local gaps. Strengthening education, training, and retention strategies will ensure a skilled workforce, attract investment, and drive sustainable economic growth.

Conclusion



The employment landscape in Ciudad Juárez continues to evolve in response to global disruptions, technological advancements, and shifting policy landscapes. While the city remains a critical hub for industrial production, particularly in the automotive, electronics, and medical device industries, structural transformations have led to significant employment shifts. Because of the COVID-19 pandemic, the transition to electric vehicles, automation, and targeted tariffs have each played a role in reshaping workforce demand, prompting companies to adjust their operations.

A key factor influencing employment dynamics in Ciudad Juárez is the rise in labor costs. The doubling of the minimum wage between 2018 and 2019 and the city's classification under the ZLFN have contributed to increased operational expenses, making it one of the costliest industrial centers in Mexico. This has prompted some companies to explore alternative locations for cost efficiency, while others have adapted by investing in automation or shifting their product focus.

The intersection of automation and supply chain adjustments has not only reshaped employment numbers but also the skills required in the workforce. Nowadays, more companies are automating their production lines to improve efficiency, reduce costs, and address labor shortages. As a result, the demand for specialized labor has increased, while lower-skilled positions have become more vulnerable to automation and cost-cutting measures. In particular, there is a growing need for bilingual talent, especially in engineering and technical fields, as companies seek professionals who can navigate cross-border operations, integrate advanced manufacturing technologies, and collaborate with international teams.

All of these factors and their impact on employment shifts in Ciudad Juárez have not been uniform across industries. While some sectors, such as medical devices, experienced growth due to increased global demand, others—particularly in traditional automotive manufacturing—have faced contractions as companies phase out internal combustion engine components.

Despite these challenges, Ciudad Juárez remains an industrial powerhouse, supporting nearly half a million jobs in 2024. Nevertheless, the ongoing decline in employment underscores the need for targeted workforce development strategies and policy responses to sustain industrial competitiveness. As global supply chains continue to evolve, Ciudad Juárez's ability to adapt will be crucial in determining its long-term economic resilience. Strategic planning that accounts for technological disruptions, shifting retail agreements, and workforce upskilling—including investment in bilingual education and engineering talent—will be essential to maintaining the city's role in North American manufacturing. By recognizing the factors driving these employment trends, policymakers, industry leaders, and other stakeholders can work collaboratively to position Ciudad Juárez for sustained growth, ensuring that it remains a key player in the global industrial economy.

Appendix

Table 1A. Wage Brackets in the ZLFN in 2018-2019 and 2024-2025 (MXN)

	2018	2019	2024	2025
W1	$x \leq \text{MXN } 88.36$	$x \leq \text{MXN } 176.72$	$x \leq \text{MXN } 374.89$	$x \leq \text{MXN } 419.88$
W2	$\text{MXN } 88.36 < x \leq \text{MXN } 176.72$	$\text{MXN } 176.72 < x \leq \text{MXN } 353.44$	$\text{MXN } 374.89 < x \leq \text{MXN } 749.78$	$\text{MXN } 419.88 < x \leq \text{MXN } 839.76$
W3	$\text{MXN } 176.72 < x \leq \text{MXN } 265.08$	$\text{MXN } 353.44 < x \leq \text{MXN } 530.16$	$\text{MXN } 749.78 < x \leq \text{MXN } 1,124.67$	$\text{MXN } 839.76 < x \leq \text{MXN } 1,259.64$
W4	$\text{MXN } 265.08 < x \leq \text{MXN } 353.44$	$\text{MXN } 530.16 < x \leq \text{MXN } 706.88$	$\text{MXN } 1,124.67 < x \leq \text{MXN } 1,499.56$	$\text{MXN } 1,259.64 < x \leq \text{MXN } 1,679.52$
W5	$\text{MXN } 353.44 < x \leq \text{MXN } 441.80$	$\text{MXN } 706.88 < x \leq \text{MXN } 883.60$	$\text{MXN } 1,499.56 < x \leq \text{MXN } 1,874.45$	$\text{MXN } 1,679.52 < x \leq \text{MXN } 2,099.40$
W6+	$\text{MXN } 441.80 \leq x$	$\text{MXN } 883.60 \leq x$	$\text{MXN } 1,874.45 \leq x$	$\text{MXN } 2,099.400 \leq x$

Table 2A. Wage Brackets in the ZLFN in 2018-2019 and 2024-2025 (USD)

	2018	2019	2024	2025
W1	$x \leq \$4.59$	$x \leq \$9.18$	$x \leq \$20.45$	$x \leq \$20.43$
W2	$\$4.59 < x \leq \9.18	$\$9.18 < x \leq \18.35	$\$20.45 < x \leq \40.90	$\$20.43 < x \leq \40.87
W3	$\$9.18 < x \leq \13.78	$\$18.35 < x \leq \27.53	$\$40.90 < x \leq \61.34	$\$40.87 < x \leq \61.30
W4	$\$13.788 < x \leq \18.37	$\$27.53 < x \leq \36.71	$\$61.347 < x \leq \81.79	$\$61.30 < x \leq \81.73
W5	$\$18.37 < x \leq \22.96	$\$36.71 < x \leq \45.88	$\$81.79 < x \leq \102.24	$\$81.73 < x \leq \102.17
W6+	$\$22.96 \leq x$	$\$45.88 \leq x$	$\$102.24 \leq x$	$\$102.17 \leq x$

Note: The average end-of-month FIX exchange rate for each year was obtained from the Central Bank of Mexico database to convert nominal salaries from MXN to USD. The numbers in parentheses are in USD.

Source: Hunt Institute calculations.

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