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Expected Occupation Growth in El Paso and Doña Ana Counties

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HUNT INSTITUTE
FOR GLOBAL COMPETITIVENESS

Expected Occupation Growth in El Paso and Doña Ana Counties



INTRODUCTION

The Paso del Norte comprises a region on the U.S. and Mexico border where the state boundaries between Texas, New Mexico and Chihuahua coincide. This region contains the neighboring cities of El Paso, Las Cruces, and Ciudad Juárez and constitutes a growing geostrategic nexus vital to the industrial and trade activity.¹

Given the region's considerable size and dynamic economic and population growth, it is essential to understand and anticipate these changes in order to plan strategically. Analysis of employment trends, for example, is paramount in planning for robust economic development, particularly to see the way that different occupations are distributed regionally.

Identifying employment distribution *by occupation* provides a holistic view of the economic environment in any given geographic region of analysis. Furthermore, it provides insights into the industries that are developed in that region. Thus, job forecasts by category may be convenient for economic analyses. For instance, policy makers may use this information to determine economic development strategies. Additionally, this information may also prove useful to investors and stakeholders for potential business attraction and provide insight to structure the vital academic and vocational training programs.

The Hunt Institute for Global Competitiveness (The Hunt Institute) has conducted a short-term occupational employment forecast for El Paso and Doña Ana counties in order to anticipate which occupations will be relevant to the region in the near future.

This report is the first occupational employment forecast using regional economic and demographic linkages conducted for these two counties combined. Also, economic projections at the national level are used to produce regional forecast scenarios in this exercise. It is important to note that Ciudad Juárez, as part of the Paso del Norte region, was excluded from this exercise due to data constraints.² Nevertheless, the Hunt Institute intends to incorporate Ciudad Juárez in future occupational forecasts.

EXERCISE

For the purpose of this exercise to identify employment by occupation, the Hunt Institute used information from U.S. government agencies to conduct its occupational employment forecast. Sources consulted include the Bureau of Labor Statistics (BLS)³ and the Bureau of Economic Analysis (BEA).⁴ This exercise uses a regional economic modeling framework, provided by Regional Economic Models, Inc., (REMI) PI+⁵, to estimate the expected growth of occupations in the region.

As a baseline, the REMI PI+ model uses historic total employment figures reported by the BEA.⁶ These figures are disaggregated⁷ by occupation to match the Standard

Occupational Classification (SOC)⁸ system published by the BLS.⁹ The REMI PI+ model combines some similar categories from the SOC major groups (23 in total)¹⁰ to produce an alternative list of 18 occupational categories. BLS figures from Occupational Employment Statistics (OES), it must be noted, are not comparable with REMI PI+ figures on occupational employment, given the definitions and procedural differences employed to derive them.¹¹ Military specific occupations are not included as employment in this category is primarily influenced by other non-economic factors. Thus, a list of 17 occupational categories is used in this exercise (*Table 1*).

Table 1. Occupational Categories

| |
|--|
| 1. Management, Business & Financial |
| 2. Computer, Mathematical, Architecture, & Engineering |
| 3. Life, Physical, & Social Science |
| 4. Community & Social Services |
| 5. Legal |
| 6. Education, Training, & Library |
| 7. Arts, Design, Entertainment, Sports, & Media |
| 8. Healthcare |
| 9. Protective Service |
| 10. Food Preparation & Serving Related |
| 11. Building, Grounds Cleaning, Maintenance, Personal Care & Service |
| 12. Sales & Related, Office and Administrative Support |
| 13. Farming, Fishing, & Forestry |
| 14. Construction & Extraction |
| 15. Installation, Maintenance, & Repair |
| 16. Production |
| 17. Transportation & Material Moving |

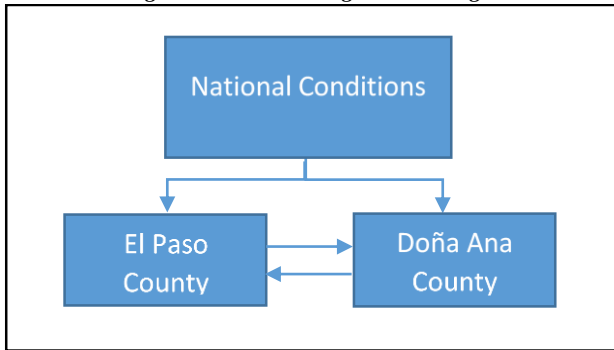
The estimations will use existing national projections of a well-known economic indicator, namely, the growth in real gross domestic product (RGDP).¹² Various national and international agencies calculate this indicator, the growth of the RGDP, for the U.S. The following agencies RGDP growth calculations were used to perform this exercise: The World Bank,¹³ International Monetary Fund (IMF),¹⁴ Congressional Budget Office (CBO),¹⁵ Federal Open Market Committee (FOMC),¹⁶ and BMI Research.¹⁷ Projections of the U.S. RGDP growth from the organizations mentioned above are shown in *Table 2*.

Table 2. Real GDP Growth Projections and Average

| Year | 2014 | 2015 | 2016 | 2017 |
|-------------------|------|------|------|------|
| IMF | 2.4% | 3.1% | 3.1% | 2.7% |
| World Bank | 2.4% | 2.7% | 2.8% | 2.4% |
| CBO | 2.4% | 2.3% | 3.0% | 2.9% |
| BMI | 2.4% | 2.5% | 2.6% | 2.5% |
| FOMC | 2.4% | 1.9% | 2.6% | 2.3% |
| Average | 2.4% | 2.5% | 2.8% | 2.6% |

National projections impact regional economic and demographic trends in the model. Also, counties such as El Paso and Doña Ana have interrelated linkages that impact their local economic settings. The REMI PI+ model takes account of these national-regional linkages (*Figure 1*).¹⁸

Figure 1. National-Regional Linkages



The national RGDP growth projections are applied to regional data in order to produce three different forecast scenarios for occupation growth in El Paso and Doña Ana counties. The forecast in *Scenario 1* uses the IMF figure, the most optimistic of the projections reviewed; the results of which are shown in *Table 3*. The forecast in *Scenario 2* employs the FOMC figure, the least optimistic of the projections reviewed. The results are shown in *Table 4*. Finally, the forecast in *Scenario 3* was produced using an average of the five projections shown in *Table 2*. These results are depicted in *Table 5*.

Scenario tables show figures for the years between 2013 and 2017. The first year column, 2013, shows occupational employment of the last historical year available to date, as reported by the BEA. The second year column, 2014, displays forecasted occupational employment using a known RGDP growth of 2.4 percent. The subsequent year columns, 2015 through 2017, depict the results of an occupational employment forecast using the different growth projections and scenarios mentioned earlier.

FINDINGS

As of 2013, the region’s five most numerous occupational categories are as follows: 1) *Sales and Related, Office and Administrative Support*, 2) *Management, Business, & Financial*, 3) *Food Preparation & Serving related*, 4) *Healthcare*, and 5) *Transportation & Material Moving*. Together, these categories represent more than 60 percent of the region’s total civilian employment.¹⁹ In contrast, those categories which reside at the lower end are 1) *Legal*, 2) *Life, Physical, and Social Sciences*, and 3) *Farming, Fishing, and Forestry*.

Based on this forecast exercise, total civilian employment is expected to grow between 5.32 percent (*Scenario 1*) and 3.05 percent (*Scenario 2*) for the time frame analyzed. The category expected to have the greatest growth in the region is *Construction and Extraction* with 16.31 percent in *Scenario 1* and 13.40 in *Scenario 2*. *Healthcare* as well as the *Community and Social Service* occupations are also expected to have a considerable growth of 5 percent. On the other hand, *Farming, Fishing and Forestry* was the category expected to have the largest decrease in terms of jobs. In 2017, employment in this category is forecasted to decrease at least 5.9 percent with respect to 2013 figures. Whereas jobs in this category are projected to decrease, one should consider its relatively small size in absolute terms, with only 2,450 jobs in 2013. Service oriented occupations are likely to continue growing in the near future and, in Doña Ana County, a movement away from *Farming, Fishing, and Forestry* related occupations is expected.

In this forecast, construction related occupations are expected to continue growing consistently, at even higher rates than observed after the post-recession recovery in 2013. It is also expected that service oriented jobs, such as healthcare, sales, or community and social occupations will continue growing in the near future. This pattern matches the national economy path, which has become increasingly service oriented over the recent decades.

CONCLUDING REMARKS

The projections derived from this exercise are encouraging as they show continued growth under the analyzed scenarios, even the least optimistic scenario shows a respectable rate of growth. But, one should always keep in mind that economic projections are sensitive to unexpected national and regional changes.

For any growing region with changing employment dynamics, such as the El Paso and Doña Ana counties, challenges and vast opportunities for growth often arise. Taking on those challenges and opportunities will require informed decision-making for smart development by stakeholders such as policy makers, and others from both the private and academic sector. Short-term occupational employment projections portray important information regarding the different jobs that will be required for the region in the near future. Accordingly, planning discussions may be enriched with exercises such as the one conducted in this document. Modeling and forecasting exercises are helpful tools for regional planning. For additional forecasting series concerning The Paso del Norte region, please refer to the Borderplex Economic Outlook, produced by the UTEP Border Region Modeling Project.²⁰

Questions or comments about this report can be addressed to the Hunt Institute for Global Competitiveness at huntinstitute@utep.edu

Table 3. Scenario 1

| | | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|-------------------|----------------|----------------|----------------|----------------|----------------|
| Management, Business, & Financial | All Region | 47.429 | 47.874 | 48.661 | 49.299 | 49.795 |
| | <i>El Paso</i> | 38.037 | 38.417 | 39.058 | 39.577 | 39.972 |
| | <i>Doña Ana</i> | 9.392 | 9.457 | 9.603 | 9.722 | 9.824 |
| Computer, Mathematical, Architecture, & Engineering | All Region | 16.214 | 16.333 | 16.527 | 16.653 | 16.743 |
| | <i>El Paso</i> | 12.786 | 12.869 | 13.005 | 13.096 | 13.157 |
| | <i>Doña Ana</i> | 3.429 | 3.464 | 3.522 | 3.557 | 3.586 |
| Life, Physical, & Social Science | All Region | 3.823 | 3.838 | 3.870 | 3.900 | 3.925 |
| | <i>El Paso</i> | 2.847 | 2.855 | 2.878 | 2.901 | 2.921 |
| | <i>Doña Ana</i> | 0.976 | 0.983 | 0.992 | 0.999 | 1.005 |
| Community & Social Service | All Region | 7.187 | 7.312 | 7.449 | 7.580 | 7.703 |
| | <i>El Paso</i> | 5.464 | 5.558 | 5.661 | 5.761 | 5.851 |
| | <i>Doña Ana</i> | 1.723 | 1.754 | 1.788 | 1.819 | 1.851 |
| Legal | All Region | 3.210 | 3.217 | 3.237 | 3.252 | 3.265 |
| | <i>El Paso</i> | 2.443 | 2.447 | 2.459 | 2.470 | 2.479 |
| | <i>Doña Ana</i> | 0.767 | 0.771 | 0.778 | 0.783 | 0.787 |
| Education, Training, & Library | All Region | 29.935 | 30.240 | 30.595 | 31.041 | 31.479 |
| | <i>El Paso</i> | 23.053 | 23.300 | 23.582 | 23.936 | 24.277 |
| | <i>Doña Ana</i> | 6.882 | 6.941 | 7.013 | 7.105 | 7.202 |
| Arts, Design, Entertainment, Sports, & Media | All Region | 5.609 | 5.637 | 5.698 | 5.732 | 5.759 |
| | <i>El Paso</i> | 4.517 | 4.539 | 4.586 | 4.612 | 4.632 |
| | <i>Doña Ana</i> | 1.092 | 1.098 | 1.112 | 1.120 | 1.127 |
| Healthcare | All Region | 38.446 | 39.179 | 39.976 | 40.685 | 41.349 |
| | <i>El Paso</i> | 29.360 | 29.919 | 30.510 | 31.049 | 31.541 |
| | <i>Doña Ana</i> | 9.086 | 9.260 | 9.466 | 9.637 | 9.808 |
| Protective Service | All Region | 13.907 | 13.979 | 14.123 | 14.264 | 14.393 |
| | <i>El Paso</i> | 11.114 | 11.172 | 11.288 | 11.401 | 11.501 |
| | <i>Doña Ana</i> | 2.793 | 2.807 | 2.835 | 2.864 | 2.892 |
| Food Preparation & Serving Related | All Region | 41.347 | 41.934 | 42.903 | 43.541 | 44.127 |
| | <i>El Paso</i> | 33.549 | 34.043 | 34.824 | 35.345 | 35.810 |
| | <i>Doña Ana</i> | 7.798 | 7.891 | 8.079 | 8.196 | 8.317 |
| Building, Grounds Cleaning, Maintenance, Personal Care & Service | All Region | 32.676 | 33.113 | 33.813 | 34.308 | 34.739 |
| | <i>El Paso</i> | 25.250 | 25.577 | 26.101 | 26.477 | 26.789 |
| | <i>Doña Ana</i> | 7.426 | 7.536 | 7.712 | 7.832 | 7.950 |
| Sales & Related, Office & Administrative Support | All Region | 130.122 | 131.353 | 133.390 | 134.659 | 135.588 |
| | <i>El Paso</i> | 107.334 | 108.394 | 110.016 | 111.038 | 111.742 |
| | <i>Doña Ana</i> | 22.788 | 22.960 | 23.374 | 23.621 | 23.847 |
| Farming, Fishing, & Forestry | All Region | 3.764 | 3.708 | 3.646 | 3.598 | 3.542 |
| | <i>El Paso</i> | 1.224 | 1.210 | 1.203 | 1.192 | 1.176 |
| | <i>Doña Ana</i> | 2.541 | 2.498 | 2.443 | 2.406 | 2.367 |
| Construction & Extraction | All Region | 22.970 | 23.339 | 24.310 | 25.641 | 26.675 |
| | <i>El Paso</i> | 18.583 | 18.897 | 19.640 | 20.682 | 21.481 |
| | <i>Doña Ana</i> | 4.387 | 4.442 | 4.670 | 4.959 | 5.195 |
| Installation, Maintenance, & Repair | All Region | 19.770 | 19.927 | 20.277 | 20.568 | 20.768 |
| | <i>El Paso</i> | 16.242 | 16.377 | 16.653 | 16.883 | 17.033 |
| | <i>Doña Ana</i> | 3.529 | 3.550 | 3.624 | 3.685 | 3.735 |
| Production | All Region | 22.784 | 22.897 | 23.201 | 23.232 | 23.125 |
| | <i>El Paso</i> | 19.451 | 19.542 | 19.788 | 19.794 | 19.677 |
| | <i>Doña Ana</i> | 3.333 | 3.356 | 3.413 | 3.438 | 3.448 |
| Transportation & Material Moving | All Region | 35.228 | 35.630 | 36.185 | 36.487 | 36.670 |
| | <i>El Paso</i> | 29.664 | 30.027 | 30.478 | 30.726 | 30.865 |
| | <i>Doña Ana</i> | 5.564 | 5.603 | 5.707 | 5.761 | 5.806 |

Note: Units are expressed in thousands.

Table 4. Scenario 2

| | | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|-------------------|----------------|----------------|----------------|----------------|----------------|
| Management, Business, & Financial | All Region | 47.429 | 47.874 | 48.075 | 48.436 | 48.727 |
| | <i>El Paso</i> | 38.037 | 38.417 | 38.586 | 38.884 | 39.114 |
| | <i>Doña Ana</i> | 9.392 | 9.457 | 9.489 | 9.552 | 9.613 |
| Computer, Mathematical, Architecture, & Engineering | All Region | 16.214 | 16.333 | 16.330 | 16.364 | 16.387 |
| | <i>El Paso</i> | 12.786 | 12.869 | 12.850 | 12.868 | 12.877 |
| | <i>Doña Ana</i> | 3.429 | 3.464 | 3.480 | 3.496 | 3.509 |
| Life, Physical, & Social Science | All Region | 3.823 | 3.838 | 3.824 | 3.831 | 3.841 |
| | <i>El Paso</i> | 2.847 | 2.855 | 2.844 | 2.850 | 2.858 |
| | <i>Doña Ana</i> | 0.976 | 0.983 | 0.980 | 0.981 | 0.983 |
| Community & Social Service | All Region | 7.187 | 7.312 | 7.358 | 7.445 | 7.535 |
| | <i>El Paso</i> | 5.464 | 5.558 | 5.591 | 5.658 | 5.724 |
| | <i>Doña Ana</i> | 1.723 | 1.754 | 1.766 | 1.787 | 1.811 |
| Legal | All Region | 3.210 | 3.217 | 3.199 | 3.196 | 3.195 |
| | <i>El Paso</i> | 2.443 | 2.447 | 2.430 | 2.427 | 2.426 |
| | <i>Doña Ana</i> | 0.767 | 0.771 | 0.769 | 0.769 | 0.770 |
| Education, Training, & Library | All Region | 29.935 | 30.240 | 30.218 | 30.481 | 30.779 |
| | <i>El Paso</i> | 23.053 | 23.300 | 23.289 | 23.501 | 23.735 |
| | <i>Doña Ana</i> | 6.882 | 6.941 | 6.929 | 6.980 | 7.044 |
| Arts, Design, Entertainment, Sports, & Media | All Region | 5.609 | 5.637 | 5.631 | 5.633 | 5.638 |
| | <i>El Paso</i> | 4.517 | 4.539 | 4.532 | 4.533 | 4.535 |
| | <i>Doña Ana</i> | 1.092 | 1.098 | 1.099 | 1.100 | 1.103 |
| Healthcare | All Region | 38.446 | 39.179 | 39.494 | 39.975 | 40.467 |
| | <i>El Paso</i> | 29.360 | 29.919 | 30.141 | 30.506 | 30.867 |
| | <i>Doña Ana</i> | 9.086 | 9.260 | 9.353 | 9.469 | 9.600 |
| Protective Service | All Region | 13.907 | 13.979 | 13.951 | 14.011 | 14.079 |
| | <i>El Paso</i> | 11.114 | 11.172 | 11.150 | 11.198 | 11.250 |
| | <i>Doña Ana</i> | 2.793 | 2.807 | 2.802 | 2.813 | 2.829 |
| Food Preparation & Serving Related | All Region | 41.347 | 41.934 | 42.379 | 42.769 | 43.169 |
| | <i>El Paso</i> | 33.549 | 34.043 | 34.397 | 34.717 | 35.031 |
| | <i>Doña Ana</i> | 7.798 | 7.891 | 7.982 | 8.052 | 8.138 |
| Building, Grounds Cleaning, Maintenance, Personal Care & Service | All Region | 32.676 | 33.113 | 33.401 | 33.704 | 33.991 |
| | <i>El Paso</i> | 25.250 | 25.577 | 25.782 | 26.009 | 26.211 |
| | <i>Doña Ana</i> | 7.426 | 7.536 | 7.619 | 7.695 | 7.780 |
| Sales & Related, Office & Administrative Support | All Region | 130.122 | 131.353 | 131.774 | 132.293 | 132.670 |
| | <i>El Paso</i> | 107.334 | 108.394 | 108.682 | 109.087 | 109.339 |
| | <i>Doña Ana</i> | 22.788 | 22.960 | 23.092 | 23.206 | 23.331 |
| Farming, Fishing, & Forestry | All Region | 3.764 | 3.708 | 3.604 | 3.537 | 3.469 |
| | <i>El Paso</i> | 1.224 | 1.210 | 1.189 | 1.171 | 1.151 |
| | <i>Doña Ana</i> | 2.541 | 2.498 | 2.415 | 2.366 | 2.318 |
| Construction & Extraction | All Region | 22.970 | 23.339 | 23.997 | 25.153 | 26.048 |
| | <i>El Paso</i> | 18.583 | 18.897 | 19.387 | 20.288 | 20.977 |
| | <i>Doña Ana</i> | 4.387 | 4.442 | 4.610 | 4.865 | 5.072 |
| Installation, Maintenance, & Repair | All Region | 19.770 | 19.927 | 20.030 | 20.203 | 20.315 |
| | <i>El Paso</i> | 16.242 | 16.377 | 16.449 | 16.583 | 16.662 |
| | <i>Doña Ana</i> | 3.529 | 3.550 | 3.581 | 3.620 | 3.653 |
| Production | All Region | 22.784 | 22.897 | 22.945 | 22.863 | 22.674 |
| | <i>El Paso</i> | 19.451 | 19.542 | 19.571 | 19.483 | 19.298 |
| | <i>Doña Ana</i> | 3.333 | 3.356 | 3.373 | 3.379 | 3.376 |
| Transportation & Material Moving | All Region | 35.228 | 35.630 | 35.753 | 35.856 | 35.894 |
| | <i>El Paso</i> | 29.664 | 30.027 | 30.114 | 30.195 | 30.213 |
| | <i>Doña Ana</i> | 5.564 | 5.603 | 5.639 | 5.661 | 5.681 |

Note: Units are expressed in thousands.

Table 5. Scenario 3

| | | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|-------------------|----------------|----------------|----------------|----------------|----------------|
| Management, Business, & Financial | All Region | 47.429 | 47.874 | 48.368 | 48.860 | 49.282 |
| | <i>El Paso</i> | 38.037 | 38.417 | 38.822 | 39.224 | 39.559 |
| | <i>Doña Ana</i> | 9.392 | 9.457 | 9.546 | 9.636 | 9.722 |
| Computer, Mathematical, Architecture, & Engineering | All Region | 16.214 | 16.333 | 16.429 | 16.506 | 16.572 |
| | <i>El Paso</i> | 12.786 | 12.869 | 12.928 | 12.980 | 13.023 |
| | <i>Doña Ana</i> | 3.429 | 3.464 | 3.501 | 3.526 | 3.549 |
| Life, Physical, & Social Science | All Region | 3.823 | 3.838 | 3.847 | 3.865 | 3.885 |
| | <i>El Paso</i> | 2.847 | 2.855 | 2.861 | 2.875 | 2.891 |
| | <i>Doña Ana</i> | 0.976 | 0.983 | 0.986 | 0.990 | 0.994 |
| Community & Social Service | All Region | 7.187 | 7.312 | 7.403 | 7.511 | 7.622 |
| | <i>El Paso</i> | 5.464 | 5.558 | 5.626 | 5.708 | 5.790 |
| | <i>Doña Ana</i> | 1.723 | 1.754 | 1.777 | 1.803 | 1.832 |
| Legal | All Region | 3.210 | 3.217 | 3.218 | 3.224 | 3.232 |
| | <i>El Paso</i> | 2.443 | 2.447 | 2.444 | 2.448 | 2.453 |
| | <i>Doña Ana</i> | 0.767 | 0.771 | 0.774 | 0.776 | 0.779 |
| Education, Training, & Library | All Region | 29.935 | 30.240 | 30.407 | 30.756 | 31.142 |
| | <i>El Paso</i> | 23.053 | 23.300 | 23.435 | 23.714 | 24.016 |
| | <i>Doña Ana</i> | 6.882 | 6.941 | 6.971 | 7.041 | 7.126 |
| Arts, Design, Entertainment, Sports, & Media | All Region | 5.609 | 5.637 | 5.664 | 5.682 | 5.701 |
| | <i>El Paso</i> | 4.517 | 4.539 | 4.559 | 4.572 | 4.585 |
| | <i>Doña Ana</i> | 1.092 | 1.098 | 1.106 | 1.110 | 1.115 |
| Healthcare | All Region | 38.446 | 39.179 | 39.735 | 40.323 | 40.925 |
| | <i>El Paso</i> | 29.360 | 29.919 | 30.325 | 30.772 | 31.217 |
| | <i>Doña Ana</i> | 9.086 | 9.260 | 9.409 | 9.551 | 9.708 |
| Protective Service | All Region | 13.907 | 13.979 | 14.037 | 14.135 | 14.242 |
| | <i>El Paso</i> | 11.114 | 11.172 | 11.219 | 11.297 | 11.380 |
| | <i>Doña Ana</i> | 2.793 | 2.807 | 2.818 | 2.838 | 2.862 |
| Food Preparation & Serving Related | All Region | 41.347 | 41.934 | 42.641 | 43.148 | 43.667 |
| | <i>El Paso</i> | 33.549 | 34.043 | 34.610 | 35.025 | 35.436 |
| | <i>Doña Ana</i> | 7.798 | 7.891 | 8.030 | 8.123 | 8.231 |
| Building, Grounds Cleaning, Maintenance, Personal Care & Service | All Region | 32.676 | 33.113 | 33.607 | 34.001 | 34.380 |
| | <i>El Paso</i> | 25.250 | 25.577 | 25.941 | 26.238 | 26.511 |
| | <i>Doña Ana</i> | 7.426 | 7.536 | 7.666 | 7.762 | 7.869 |
| Sales & Related, Office & Administrative Support | All Region | 130.122 | 131.353 | 132.582 | 133.453 | 134.186 |
| | <i>El Paso</i> | 107.334 | 108.394 | 109.349 | 110.044 | 110.587 |
| | <i>Doña Ana</i> | 22.788 | 22.960 | 23.233 | 23.410 | 23.599 |
| Farming, Fishing, & Forestry | All Region | 3.764 | 3.708 | 3.625 | 3.567 | 3.507 |
| | <i>El Paso</i> | 1.224 | 1.210 | 1.196 | 1.181 | 1.164 |
| | <i>Doña Ana</i> | 2.541 | 2.498 | 2.429 | 2.386 | 2.343 |
| Construction & Extraction | All Region | 22.970 | 23.339 | 24.153 | 25.393 | 26.374 |
| | <i>El Paso</i> | 18.583 | 18.897 | 19.513 | 20.481 | 21.238 |
| | <i>Doña Ana</i> | 4.387 | 4.442 | 4.640 | 4.911 | 5.135 |
| Installation, Maintenance, & Repair | All Region | 19.770 | 19.927 | 20.154 | 20.382 | 20.550 |
| | <i>El Paso</i> | 16.242 | 16.377 | 16.551 | 16.730 | 16.855 |
| | <i>Doña Ana</i> | 3.529 | 3.550 | 3.602 | 3.652 | 3.696 |
| Production | All Region | 22.784 | 22.897 | 23.073 | 23.044 | 22.909 |
| | <i>El Paso</i> | 19.451 | 19.542 | 19.679 | 19.636 | 19.495 |
| | <i>Doña Ana</i> | 3.333 | 3.356 | 3.393 | 3.408 | 3.414 |
| Transportation & Material Moving | All Region | 35.228 | 35.630 | 35.969 | 36.166 | 36.297 |
| | <i>El Paso</i> | 29.664 | 30.027 | 30.296 | 30.456 | 30.552 |
| | <i>Doña Ana</i> | 5.564 | 5.603 | 5.673 | 5.710 | 5.746 |

Note: Units are expressed in thousands.

Notes

¹ Hunt Institute for Global Competitiveness; “Paso Del Norte Economic Indicator Review”, (Spring 2015).
<http://huntinstitute.utep.edu/>

² Government agencies in the U.S. and Mexico report economic and demographic information using different definitions, making comparison inaccurate for the purpose of this exercise.

³ The Bureau of Labor Statistics (BLS) is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics. The BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data to the American public, the U.S. Congress, other Federal agencies, State and local governments, business, and labor. The BLS also serves as a statistical resource to the Department of Labor.
http://www.bls.gov/dolfaq/bls_ques26.htm

⁴ The Bureau of Economic Analysis (BEA) is an agency of the Department of Commerce. Along with the Census Bureau, BEA is part of the Department's Economics and Statistics Administration. BEA produces economic accounts statistics that enable government and business decision-makers, researchers, and the American public to follow and understand the performance of the Nation's economy. To do this, BEA collects source data, conducts research and analysis, develops and implements estimation methodologies, and disseminates statistics to the public.
<http://www.bea.gov/about/mission.htm>

⁵ REMI PI+ Model is used by government agencies, consulting firms and educational institutions such as the New York State Department of Economic Development, Ernst & Young, or the Massachusetts Institute of Technology. PI+ is a structural economic forecasting and policy analysis model. It integrates input-output, computable general equilibrium, econometric, and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to compensation, price, and other economic factors.
http://www.remi.com/download/documentation/pi+/pi+_version_1.7/PI+_v1.7_Model_Equations.pdf

⁶ The BEA employment series for states and local areas comprises estimates of the number of jobs, full-time plus part-time, by place of work. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included, but unpaid family workers and volunteers are not included.
<http://www.bea.gov/regional/definitions/>

⁷ BEA and BLS projections of industrial and occupational employment are developed in a series of six interrelated steps, each of which is based on a different procedure or model and related assumptions: labor force, aggregate economy, final demand (GDP) by consuming sector and product, industrial activity, employment by industry, and employment by occupation. The results produced by each step are key inputs to the following steps, and the sequence may be repeated multiple times to allow feedback and to insure consistency. REMI aggregates the detailed industries to 160, 70, or 23, as applicable, and the detailed occupations to 95 or 18. The fixed proportion of occupational employment is calculated by summing the employment across an industry, and then dividing each occupation by the industry total. The rates of occupational change between 2012 and 2022 are calculated by linear interpolation, then extended back historically at

the same rate of change, and extended forward at one-half the rate of change. The National Industry-Occupation Employment Matrix is developed by the Bureau of Labor Statistics as part of its ongoing Occupational Employment Projections Program. These data, derived from the 2012-2022 National Employment Matrix, underlie information on occupational employment growth presented in the 2012-13 edition of the Occupational Outlook Handbook.
http://www.remi.com/download/documentation/pi+/pi+_version_1.7/Data_Sources_and_Estimation_Procedures.pdf

⁸ The Standard Occupational Classification system is used by Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of 840 detailed occupations according to their occupational definition. To facilitate classification, detailed occupations are combined to form 461 broad occupations, 97 minor groups, and 23 major groups. Detailed occupations in the SOC with similar job duties, and in some cases skills, education, and/or training, are grouped together.
<http://www.bls.gov/soc/>

⁹ “Employees” are all part-time and full-time workers who are paid a wage or salary. The survey does not cover the self-employed, owners and partners in unincorporated firms, household workers, or unpaid family workers.
http://www.bls.gov/oes/oes_ques.htm

¹⁰ Business related occupations such as *Management* and *Business, and Financial Operations* were grouped into the same category. Scientific occupations such as *Computer and Mathematical*, and *Architecture and Engineering* were also comprised to one category. The two different groups of Healthcare occupations (*Practitioners and Technical*, and *Support*) were contained into the same one. On the same tune, *Sales and Related*, and *Office and Administrative Support* occupations are considered as one category.

¹¹ BEA employment definition includes the self-employed and the BLS definition does not. REMI PI+ occupational employment represents industry employment that has been distributed to occupations based on a national occupation-by-industry matrix. (REMI PI+ V1.7)

¹² Real gross domestic product (RGDP) - The total market value of all final goods and services produced in an economy in a given year calculated by using a base year's price for goods and services; nominal gross domestic product (GDP) adjusted for inflation.
<https://www.stlouisfed.org/education/glossary>

¹³ The World Bank; “Global Economic Prospects”, (June, 2015).
<http://www.worldbank.org/en/publication/global-economic-prospects/summary-table>

¹⁴ International Monetary Fund (IMF); “World Economic Outlook Databases”, (April, 2015).
<http://www.imf.org/external/ns/cs.aspx?id=29>

¹⁵ Congressional Budget Office; “An Update to the Budget and Economic Outlook: 2015 to 2025”, (August, 2015).
<https://www.cbo.gov/publication/50724>

¹⁶ Federal Open Market Committee (FOMC); “FOMC Summary of Economic Projections for the Growth Rate of Real Gross Domestic Product, Central Tendency, Midpoint”, (June, 2015).

<https://research.stlouisfed.org/fred2/series/GDPC1CTM/>

¹⁷ BMI Research; “Assessing The Aftermath Of Three Key Events”, (July, 2015).

¹⁸ Multi-regional models have interactions among regions, such as trade and commuting flows. These interactions include trade flows from each region to each of the other regions.

http://www.remi.com/download/documentation/pi+/pi+_version_1.7/PI+_v1.7_Model_Equations.pdf

¹⁹ Civilian employment equals total employment, minus military employment. This exercise does not include military employment.

²⁰ UTEP Border Region Modeling Project; “Borderplex Economic Outlook”, (November, 2014).