BUREAU OF BUSINESS & ECONOMIC RESEARCH

NEW MEXICO EDUCATIONAL RETIREMENT BOARD BENEFIT ANALYSIS

Prepared for The New Mexico Educational Retirement Board

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Executive Summary

New Mexico Public Employees Retirement Association (PERA) and New Mexico Educational Retirement Board (ERB) employers and these pension systems are important contributors to the local economy. State and Local Governments in New Mexico employed 150,000 workers and paid $7 billion in annual earnings in 2018 – 60% of these jobs were education workers, namely school districts and 2-year and 4-year colleges. In fiscal year 2019, the two retirement systems combined to pay $2.34 billion in pension benefits to 91,400 beneficiaries. Totaling active and retired members and the payments they received in 2018, payments exceeded $9.3 billion to 241,400 employees/retirement beneficiaries.

ERB contracted BBER to assess the historical differences between ERB and PERA. This report seeks to illuminate key differences and key factors that contribute to differentials in employee contributions, active year earnings, and retirement benefits.

The analysis compares three comparable worker types across four discrete time periods, or worker "cohorts." In order to capture variations across time, the four cohorts consider workers beginning service in 1958, 1978, 1998, and 2018. The first worker type compares the average education worker alongside the average state government worker; the average education worker includes elementary, secondary, and post-secondary employees while the average state worker includes all classified and exempt workers. The second worker type compares the average teacher with the Education Administrator-Operational (EA-O); these two positions both require a minimum of a Bachelor's degree in Education. Because more than half of teachers hold a Master's degree or higher, the third comparison considers the average teacher along the Education Administrator-Advanced (EA-A), which lists a Master's degree in Education as the "preferred" level of education.

BBER's analysis of state government and education workers with comparable education levels suggests that employees belonging to the PERA Retirement Plan receive more in pension benefits than education workers in the ERB Retirement Plan for all worker types for all four cohorts: 1958, 1978, 1998, and 2018.[1] For the 1978 and 1998 cohorts PERA members, depending on the worker type, earned 44%-90% more in retirement benefits than their ERB counterparts; as both retirement plans have trimmed benefits in the last decade the differential has become more modest, ranging from 17% to 49% depending on worker type for the 2018 cohort. The pension ratios we calculated, which consider pension benefits to contribution and salary amounts, assist in the comparison of benefits between the two plans; the Pension/Employee Contributions and Pension/Average Career Salary ratios present compelling observations. Additionally, on average PERA employees earn slightly more during their active years for these cohorts. The combined effect is that PERA members fair better than ERB members during their working years as well as in retirement even when considering educational attainment levels.

[1] The ERB workers earned more for the 1958 cohort across worker type, which caused ERB members to generate more in career earnings compared to their PERA counterparts. Since then, state employees have experienced stronger wage growth in the last several decades, causing these workers to generate greater career earnings for the 1978, 1998, and 2018 cohorts.

The BBER study identifies several trends that help to paint the picture for why these key variances in benefits between the two retirement plans have occurred. They are: 1) PERA's higher COLA rate, which averaged 3% compared to ERB's average rate of 2% for much of the study period. 2) For almost the entire study period, PERA members were only required to wait 2 years before receiving a COLA benefit while the ERB wait period was 12-15 years depending on the cohort. These first two apply to all four cohorts. 3) Pension multipliers also played an important role. PERA's considerably larger multiplier of 3% for the 1978 and 1998 groups, compared to ERB's 2.35%, contributed to large differences in pension benefits for these two cohorts. Although plan changes in the last decade have contributed to the narrowing of differences in retirement benefits for the 2018 cohort, PERA's 2.5% multiplier -- which took effect in 2013 while ERB's multiplier has remained unchanged at 2.35% since the early 1990's -- and PERA's 2-year waiting period compared to ERB's estimated 12 year wait period suggests that PERA members should fare better than ERB members for the 2018 cohort.

Additional findings show that ERB employee contribution rates have been higher than PERA's since the 1980's (through the present time). Also, PERA employer contribution rates have exceeded ERB's by a margin of 3-8% since the early 1980's. Finally, we would be remiss if we did not make note of wage and salary trends by gender. Although we were unable to secure consistent historical occupation salary data at the state level to assess gender's effect on the results, we reviewed national data and found that pay disparities between men and women persist, using the most current available numbers, with women making 81 cents for every $1 earned by men; when controlling for education the differential is larger with women holding a Bachelor's degree earning 76 cents for every $1 earned by their male counterparts, and 73 cents for Advanced degree holders. (BLS, 2018) Needless to say, pay disparities between genders were even more pronounced when these data were first collected. Although this study was not able to consider the impact of gender on career earnings and retirement benefits for ERB and PERA given the lack of detailed data, the national statistics suggest that gender does play a role.

Differences over Working Active Career and Retirement: Salary, Net of Pension Contributions, Plus Pension Benefit (PERA in excess of ERB- All classifications)

	Cohort			
Employee Job Type	**1958**	**1978**	**1998**	**2018**
PERA: Average State Govt (ALL Classified and Exempt)/ERB: Average Education Worker	(69,487)	318,346	414,723	368,623
PERA: Education Administrator Operational/ERB: Average teacher (BA)	(247,704)	193,077	191,343	131,033
PERA: Education Administrator Advanced/ERB: Average teacher (MA)	78,332	608,234	603,284	536,415

*Basic formula is PERA (Active Career Salary - Employee Contributions + Pension Benefit) - ERB (Active Career Salary - Employee Contributions + Pension Benefit)
**All values are cumulative, inflation adjusted U.S. $-dollars

Introduction

Local governments are important to the local economy and to New Mexican families. In normal times and especially in periods of economic stress the wages and pensions for these workers, pensioners and their families are critical to the stability of the New Mexico economy.

Using 2019 Quarterly Census of Employment and Wages from the NM Department for Workforce Solutions, State and Local Government workers in NM earned over $7 billion in wages and salaries and accounted for over 150,000 jobs (18.2% of statewide employment and 17.8% of total NM salaries).[2] Notably, roughly 60% of these State and Local employees were education jobs.[3] The two pension funds also contributed significantly to the state economy, paying a combined $2.334 billion in pension benefits in fiscal year 2019 to roughly 91,400 beneficiaries.[4,5] In the last year PERA and ERB employers, and the pension systems themselves, paid out over $9.3 billion in wages, salaries and pension benefits to New Mexicans.

The New Mexico Education Retirement Board (ERB) contracted UNM's Bureau of Business and Economic Research (BBER) to assess historical differences between PERA and ERB pension benefits, as measured in terms of employee contributions, career lifetime earnings, and benefits paid. Differences are explained in terms of rules governing minimum retirement age and service time, and rates of employee contribution, benefit multipliers and Cost of Living Adjustments (COLA). For simplicity, the assessment compares PERA and ERB employees with similar education and salaries over four 20-year intervals (cohorts), with service beginning in 1958, 1978, 1998, and 2018. Projections of future contributions and benefits are based on current rules and rates.

This report is organized as follows. The first section of this report summarizes some of the key findings of our analysis. The next section discusses the data sources utilized, the methods employed, the key inputs and the basic assumptions used to complete this analysis. The third section reviews the estimated wages and salaries for the hypothetical workers considered in this analysis. The fourth sections is a detailed discussion of the results and the final section reviews available gender data by educational attainment levels and sector.

[2] NM Department for Workforce Solutions, Quarterly Census of Employment & Wages (2019).
[3] Estimates derived from U.S. Census ASPEP 2018 estimates. Elementary & Secondary employees account for approximately 37% and 21%, respectively, of all State and Local jobs.
[4] NMERB Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2019, p. 29.
[5] NMPERA Comprehensive Annual Financial Report 2019, p.p. 33, 203.

Summary of Results

This section reviews the key differences in the cumulative career earnings and cumulative pension benefits. The three worker types considered are: 1) Average of all education employees (ERB) and average salary of all Classified & Exempt State employees (PERA); 2) average teacher and a comparable state government employee (an Education Administrator-Operational) with a similar educational requirement[6]; and 3) average Elementary and Secondary Teacher and a state government employee for which a master's degree is the preferred educational experience level.

Our analysis found that PERA members made more in retirement than the ERB member for all four cohorts and worker types on an absolute (dollar) and relative basis as well as when adjusting for Employee Contributions and average annual career salaries. Additionally, after adjusting for Employee Contributions, our analysis found that the PERA members also received more salary earnings than ERB workers during their active years for all worker types and cohorts with the exception of members beginning service in 1958. The following tables capture the key differences.

Percent Difference in Cumulative Pension Benefits

Worker Type	*1958*	*1978*	*1998*	*2018*
ALL. State and ALL Education	19%	65%	68%	37%
Teacher and Educ. Admin.-Operational	7%	49%	44%	17%
Teacher and Educ. Admin.-Advanced	36%	90%	82%	49%

Percent Difference in Cumulative Active Career Salary Earnings

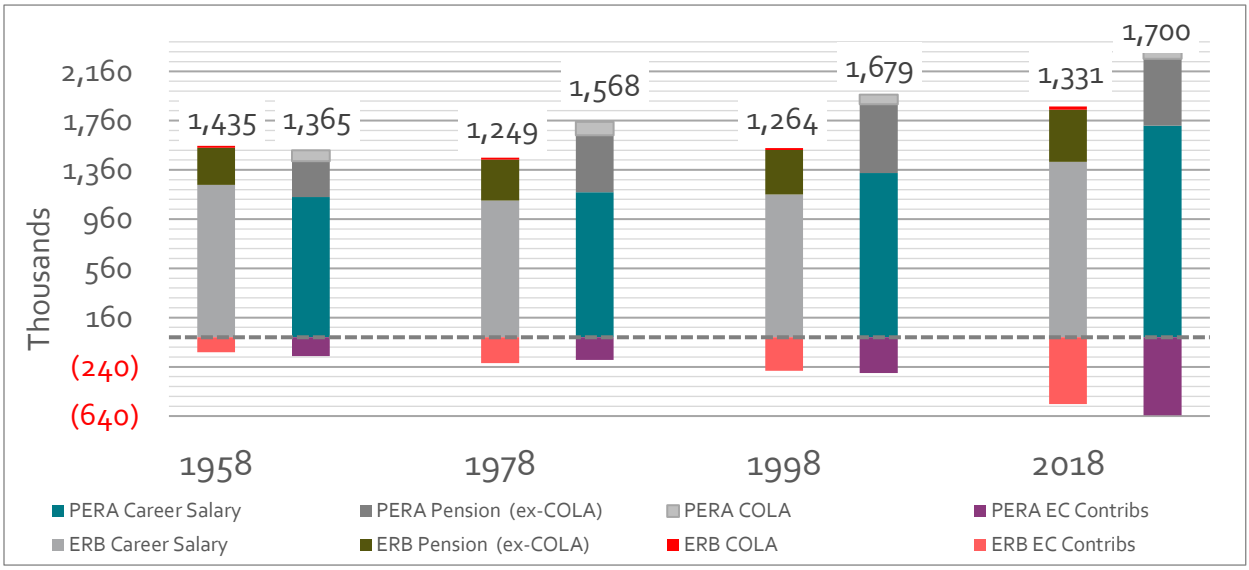
Worker Type	*1958*	*1978*	*1998*	*2018*
ALL. State and ALL Education	-12%	10%	18%	23%
Teacher and Educ. Admin.-Operational	-24%	1%	2%	5%
Teacher and Educ. Admin.-Advanced	-3%	27%	29%	33%

1) All Education employees and All Classified & Exempt State employees

[6] The Minimum Qualifications for an Education Administrator is a Bachelor's degree in Education, Public Education, Public Administration or Business Administration and two (2) years of experience as a teacher and/or program administrator.

Figure 1 illustrates the key differences in terms of career salary earnings, pension benefits received (exclusive of COLA benefits), COLA pension benefits received, and Employee Contributions (EC). All values are cumulative. This figure shows that the PERA member received more, on a straight dollar basis, in active career earnings and markedly more in retirement benefits for the 1958, 1978, 1998, and 2018 cohorts. Notably the differential in Employee Contributions between ERB and PERA are slight on an absolute basis ranging from 6% (1998) to 27% (1958) and averaging 16% for the four cohorts. After adjusting for the amount of employee contributions and career salary earnings ($thousands), the PERA member still received more in pension benefits compared to ERB for all four cohorts. (The "Detailed Results" section contains an in depth review of the two Plans)

Figure 1. State (ALL Classified & Exempt) and ALL Education Workers (1958-2018)

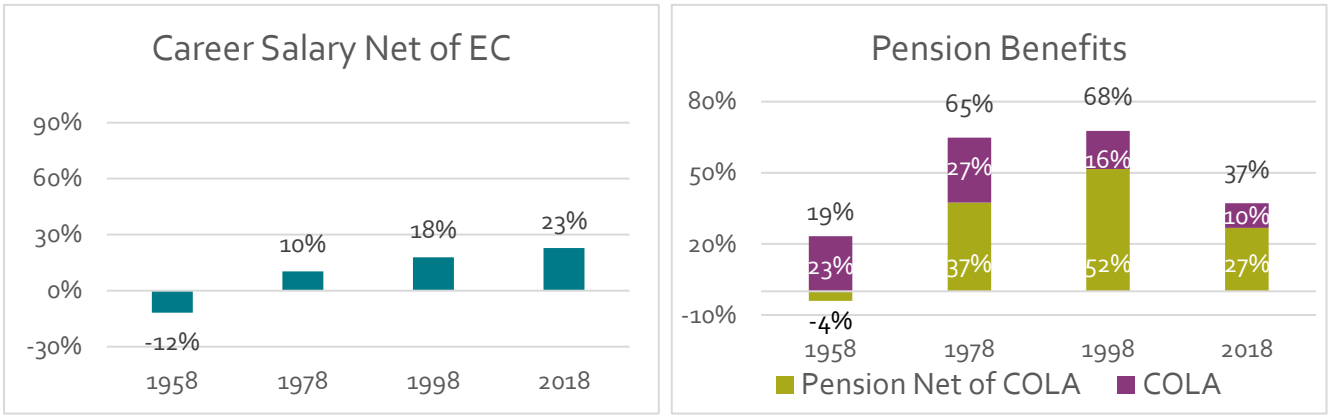


(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

While the above chart considers the two plans on an absolute dollar basis, the following (Figure 2) compares the cumulative career salaries and pension benefits, net of employee contributions, for members from the two plans on a percentage basis. The following charts show:

- The ERB member beginning service in 1958 earned 12% more (net of EC) during their active career, however, their PERA counterpart made 19% more in retirement.
- For the 1978 cohort, the PERA member made 10% more in career salary earnings and 65% more in pension benefits.
- The PERA member in the 1998 cohort will earn 18% more in career salary earnings and 68% more in pension benefits.
- For the 2018 cohort, the PERA member will earn 23% more in his active career years and 37% more than the ERB member in retirement.

Figure 2. Average PERA and Average ERB Worker Differential (1958, 1978, 1998, 2018)

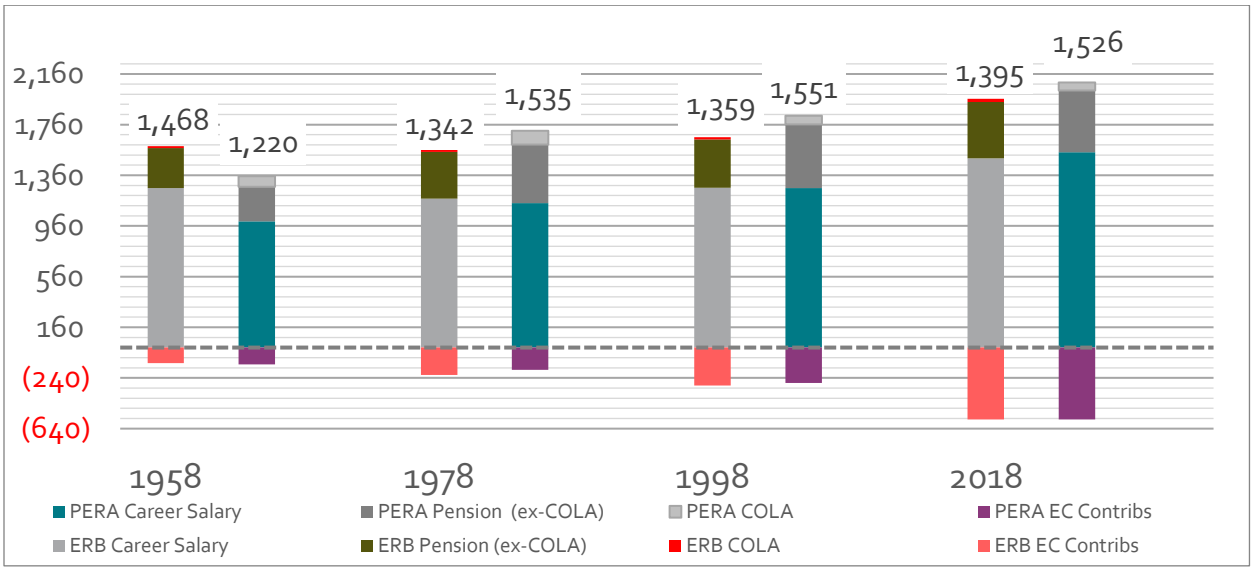


(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

2) Elementary and Secondary Teacher (ERB) and an Education Administrator-Operational (PERA)

For the 1958 cohort, although the ERB member generated more in active career earnings, the PERA member received more in pension benefits. Along the same lines, the ERB member beginning service in 1978 earned more during his active career and paid more in employee contributions, yet the PERA member's pension was greater. For the 1998 cohort, the career earnings were comparable between the two Plans with ERB paying more in Employee Contributions, however, the PERA member received significantly more in pension benefits. For the final cohort (2018) the PERA member earned more during the active and retirement years, although the employee contributions were comparable. (Figure 3)

Figure 3. Education Administrator-Operational and Average Teacher (1958-2018)

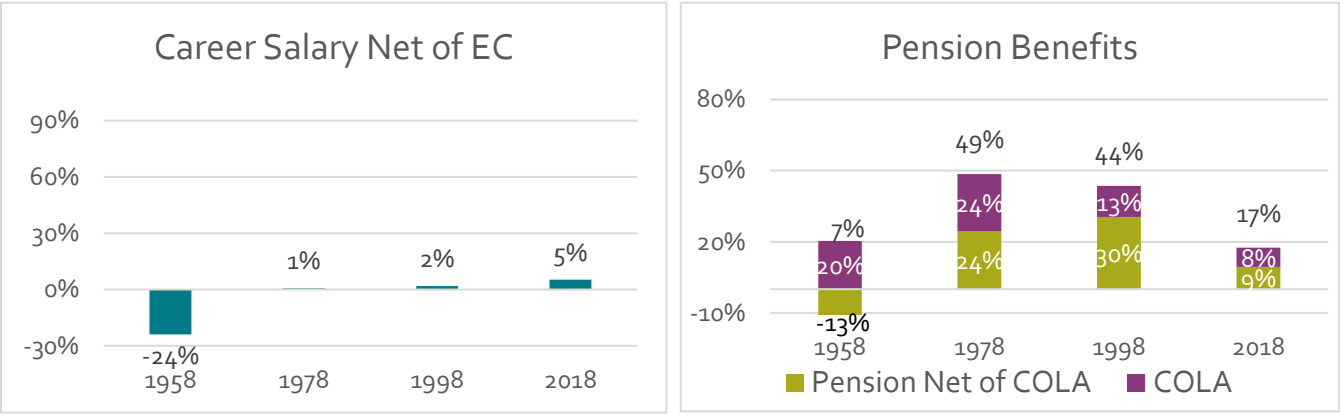


(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

The following compares the differences between salary earnings and pension benefits on a percentage basis for the Education Administrator-Operational and the Average Teacher (Figure 4):

- The 1958 comparison shows the ERB member earned 24% more (net of employee contributions) during their active career, however, the PERA member made 7% more in retirement.
- For the 1978 cohort, the PERA and ERB member made roughly the same in career salary earnings while the PERA member made 49% more in pension benefits.
- For workers beginning service in 1998, the career salary earnings are comparable between ERB and PERA, however, the PERA member will earn 44% more in pension benefits.
- For the 2018 cohort, the PERA member will earn 5% more in his active career years and 17% more in retirement than the ERB member.

Figure 4. Education Administrator-Operational and Average Teacher (1958, 1978, 1998, 2018)

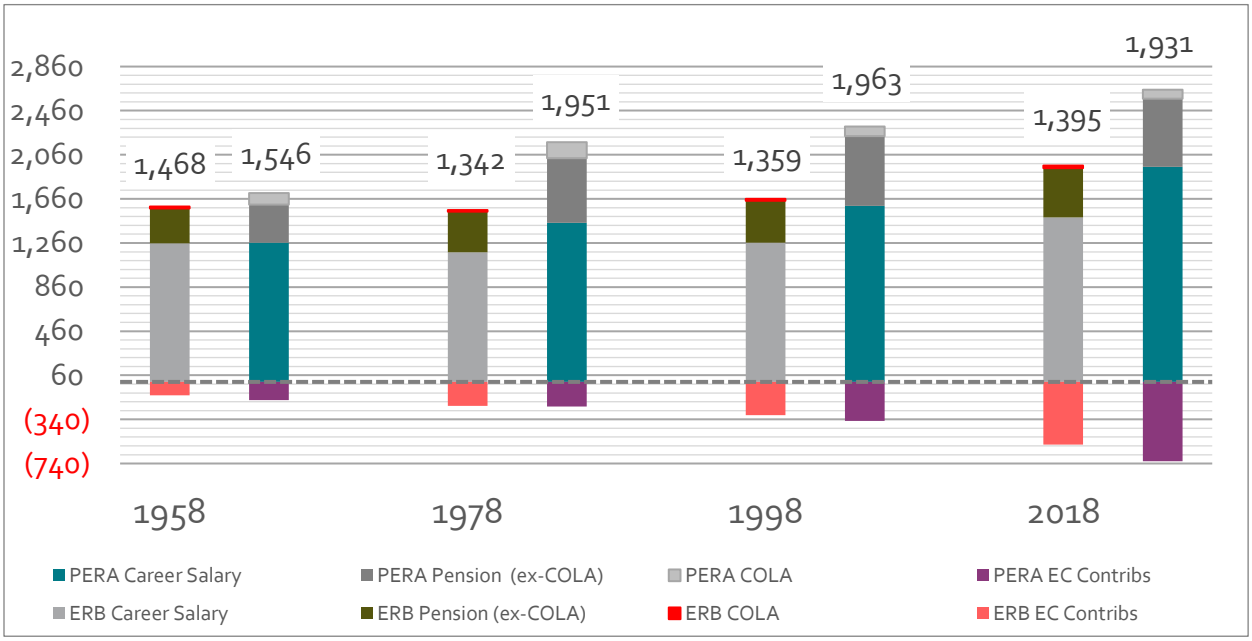


(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

3) Elementary and Secondary Teacher (ERB) and State employee for which a master's degree is the preferred.

According to the most recent U.S. occupational data from the BLS, more than half of teachers have a Master's degree or higher.[7] In this comparison the PERA employee makes more during her active and retirement years. When controlling for the employee contributions paid, the pension received by the PERA employee was substantially larger than the ERB member's while the pension was slightly better in 2018 and comparable for the 1958 cohort. (Figure 5)

Figure 5. Education Administrator-Advanced and Average Teacher (1958-2018)



(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

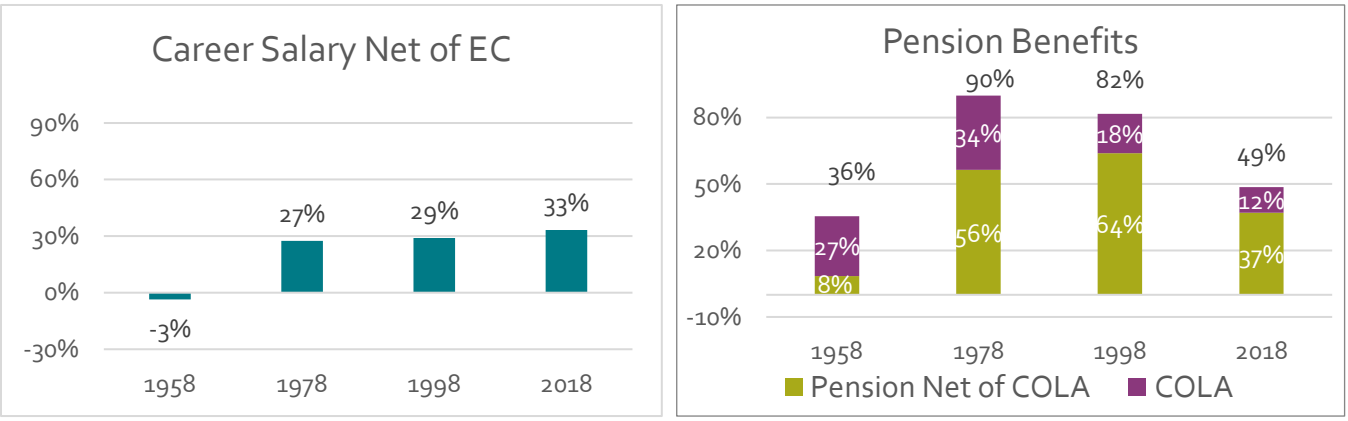
The following compares the differences between salary earnings and pension benefits on a percentage basis for the Education Administrator-Advanced and Average Teacher (Figure 6):

- For workers beginning service in 1958, the ERB member earned 3% more (net of employee contributions) during his active career, while, the PERA member made 36% more in retirement.

[7] BLS, Table 5.3 Educational attainment for workers 25 years and older by detailed occupation, 2016-2017.(https://www.bls.gov/emp/tables/educational-attainment.htm)

- For the 1978 cohort, the PERA member made 27% more in career salary earnings and 90% more in pension benefits.
- The PERA member in the 1998 cohort will earn 29% more in career salary earnings and 82% more in pension benefits.
- For the 2018 cohort, the PERA member will earn 33% more in his active career years and 49% more than the ERB member in retirement.

Figure 6. Education Administrator-Advanced and Average Teacher (1958, 1978, 1998, 2018)



(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

Data Sources, Methodology, Key Inputs and Assumptions

Data used in this analysis as the basis for calculating the career salaries and retirement benefits are estimates derived from U.S. Census data and payroll, and average salary data as reported by the state agencies responsible for the oversight of education and state employees.

Although state agencies have good, publicly available data dating to the 2000's, BBER was unable to secure complete salary information back to 1958 by the different worker types. Absent the complete actual wage information for state and school employees, BBER utilized annual changes in U.S. Census Annual Survey of Public Employment Payroll (ASPEP) data to estimate salaries back to 1958 with available state agency data as the basis for these estimates.[8] We ran a simple OLS regression analysis to confirm the relationship between the Census and the available state agency salary information, to test if the annual variation in the Census data is a good predictor of pre-2000 wages and salaries.[9] We found the relationship to be strong and the regression fit to be statistically significant. All wage data was adjusted for inflation using CPI-U as the deflator.

There are certain limitations with the data we utilized for this analysis. First, the U.S. Census data may not completely reflect wage growth at the individual worker level if there were large shifts in the workforce. For example, if the number of low wage workers was to decline, this could cause average wages and salaries to be on the rise. Second, we were not able to verify if the state government classifications we used existed prior to 2004, the earliest year for which data is available. Average salary calculations completed using payroll and employment levels, however, large shifts in the workforce may influence these averages. For example, if low wage workers decline, this trend will cause average wages and salaries to appear to rise.

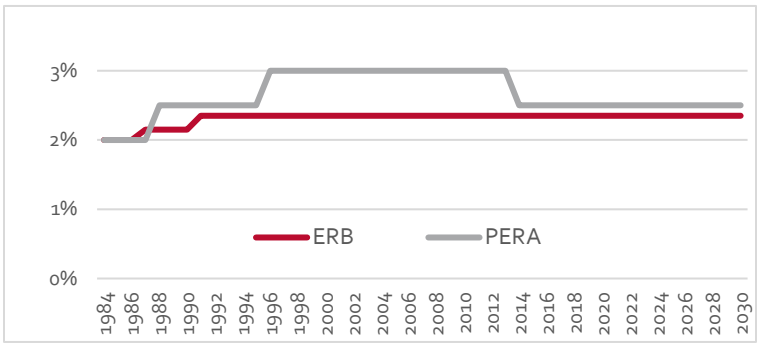
Since the basic formula for calculating retiree benefits for both plans is the **Final Average Salary x Years of Service x Pension Multiplier,** the following section compares these pension formula factors over the study period.

Multiplier, Years of Service (YOS), and Final Average Salary

The multiplier is one of the largest determinants in benefits received by retirees. Although the two plans had the same multiplier of 2% at the inception of the analysis period, PERA increased theirs to 2.5% in the late 1980's and again nearly a decade later to 3%. ERB raised its multiplier to 2.35% by the early 1990's, where it has remained ever since. As a result of the higher multiplier, the starting base salaries for PERA retirees exceed those for ERB in the 1978, 1998, and 2018 cohorts. The effect of PERA's higher multiplier has allowed PERA members to retire with a higher base salary than ERB members. (Figure 7) The other important variable for the determination of member benefits, is the Years of Service (YOS), which has been roughly equivalent during the analysis period although PERA uses a three-year calculation while ERB uses a five-year requirement. (Figure 8)

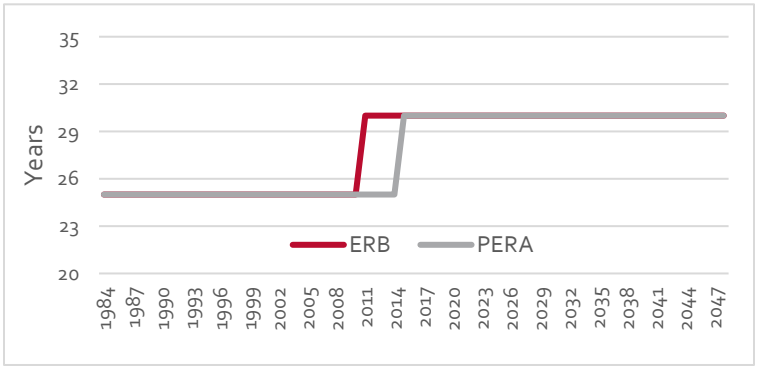
[8] https://www.census.gov/programs-surveys/apes.html
[9] The teacher data exhibited an R-Squared of 0.93 and 0.87 for the State Personnel data.

Figure 7. PERA and ERB Multipliers, 1984 – 2030



(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Figure 8. PERA and ERB Minimum Years of Service, 1984 – 2030[10]



(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

COLA Rates

The COLA is the variable that determines how much a retiree's pension benefit will grow (in order to keep pace with inflation). The ERB pension has pegged its COLA to the Consumer Price Index (CPI) since the early 1980's, resulting in an average COLA of less than 2% from 1984 to 2020. In contrast, PERA instituted a fixed 3% for the same time period, lowering the rate to 2% for the period from 2014 to 2023 and instituting a funding/profit sharing formula after that. ERB also adopted a COLA reduction formula dependent on the Plan's funding status in 2013. PERA's base case expectation for COLA's after the phasing out of its 2% COLA is 1.38% compared to 1.44% for ERB. (Figure 9)

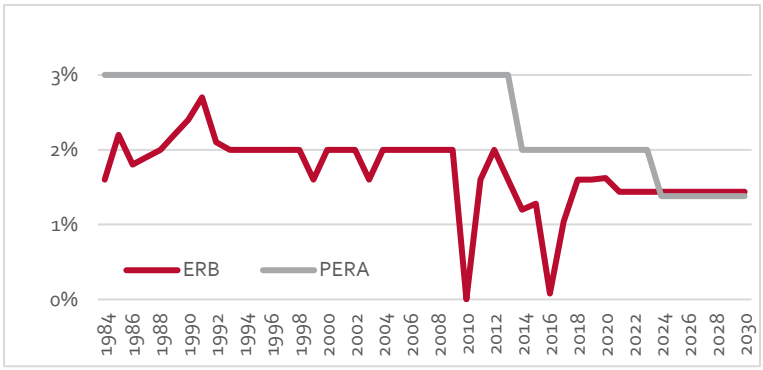
Another important component of the COLA calculation is the wait period to begin receiving the COLA. Since 1983, PERA maintained a 2 calendar year waiting period before members could receive their first COLA payment; this threshold was in place for 30 years (through 2013), with an increase to 7 years over the following decade with the 2-year wait period restored effective in year 2024. In contrast, ERB retirees were required to forego a COLA until they attained the age of 65 for the period from 1983 to 2009, with the wait period increased to the age of 67 for members beginning employment on or after July 1, 2013; this rule had the effect

[10] PERA implemented the Rule of 85 (combined years of service and age must be equal or greater) in 2013. This analysis assumes that the average worker in the 2018 cohort begins service at the age of 25, works for 30 years and retires at the age of 55.

of ERB members in the 1958, 1978, and 1998 cohorts having to wait 15 years to receive a COLA while the 2018 cohort waits 12 years. This key difference is important because the COLA benefit compounded over a longer period of time for PERA members, resulting in a larger retirement benefit for PERA members overall. (Figure 10)

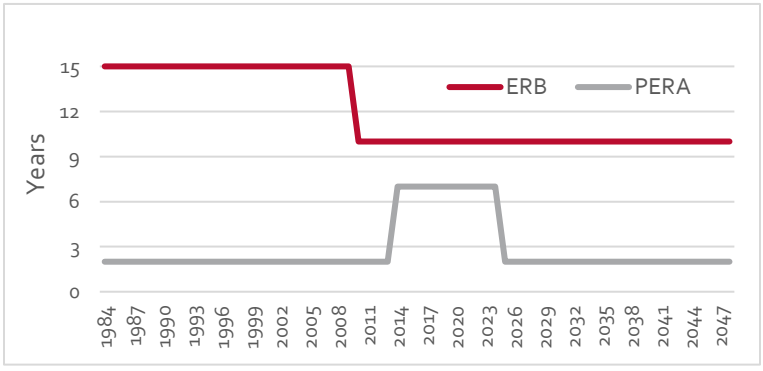
The importance of this benefit in analyzing differences in pension benefits between the two plans will be discussed in more detail in the Results section of this report.

Figure 9. Historical and Forecasted COLA Rates, 1984 – 2030



(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Figure 10. COLA Wait Period, 1984 – 2030



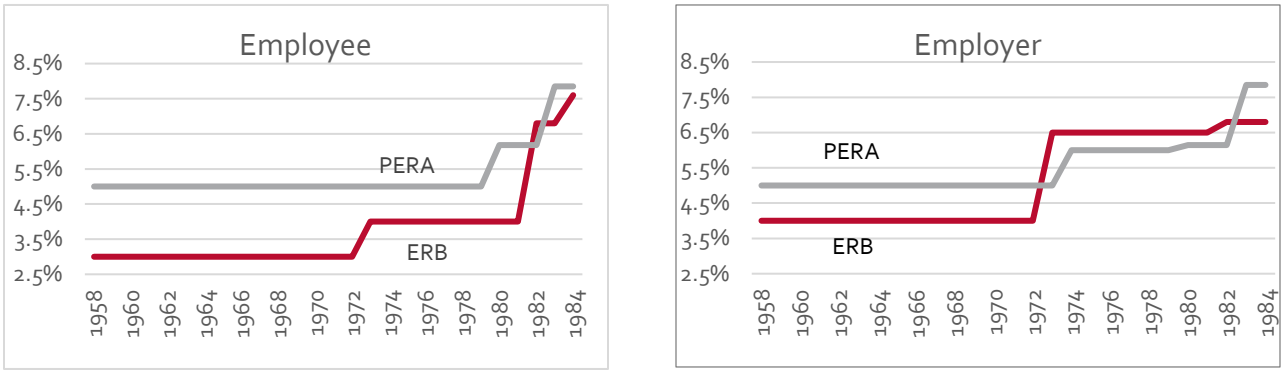
(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Employee and Employer Contribution Rates

Additional key variables for this analysis are the Employee and Employer contribution rates. Changes in these rates over time are depicted in Figures 11-14. As the charts depict, PERA maintained a higher Employee rate for the duration of the 1958 cohort while ERB maintained a higher Employee rate for the active years of the 1978 and 1998 cohorts. Over the majority of the 2018 cohort's active years, the PERA Employee rate is 0.22% higher than ERB's. The net effect is that PERA members in the 1958 and 2018 cohorts contribute a larger percentage

of their salaries, while the ERB members in the 1978 and 1998 contribute more of their salaries to their pensions. (Figures 4-6) While the two funds had comparable Employer contribution rates through the early 1980's, PERA employer rate increases have caused PERA Employer contributions to exceed ERB's by a significant margin, ranging from roughly 3.3%-8%.

Figure 11. 1958 Cohort: Employee and Employer Contribution Rates

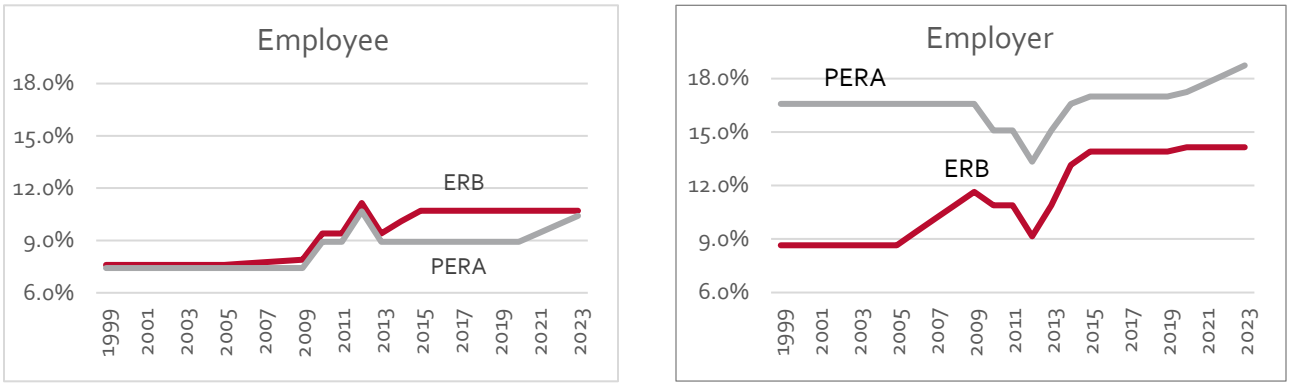


(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Figure 12. 1978 Cohort: Employee and Employer Contribution Rates

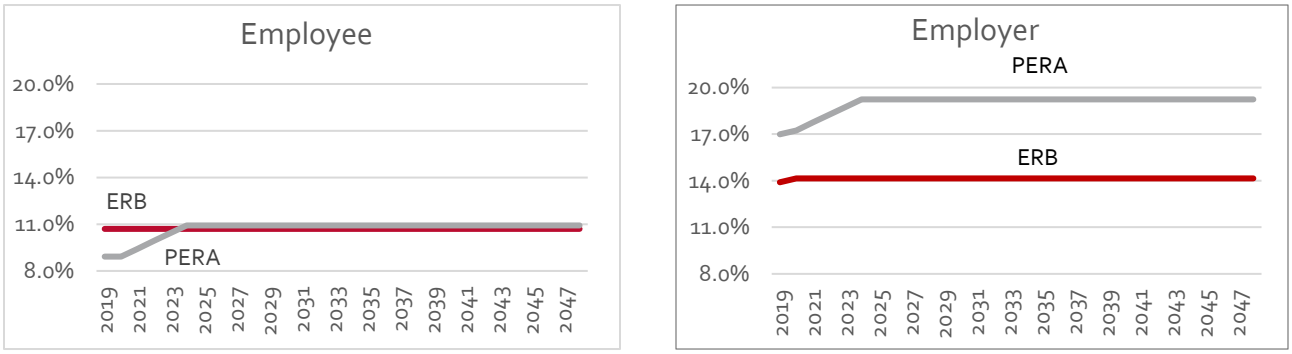
(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Figure 13. 1998 Cohort: Employee and Employer Contribution Rates



(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Figure 14. 2018 Cohort: Employee and Employer Contribution Rates



(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

Other Inputs & Assumptions

An important assumption was that workers retire at their earliest eligibility date. The result is that both ERB and PERA members work for 25 years for the 1958, 1978, and 1998 cohorts, retiring at the age of 50. Members from both plans in the 2018 cohort work for 30 years before retiring at the age of 55. In actuality plan participants, may forego college or technical degrees beginning their service shortly after high school. Similarly, the average retirement age for these two plans is higher given that members may pause their service to raise children, leave government employment for a period of time, or work for longer in order to maximize their retirement benefits. With respect to mortality expectations, we used the blended (male/female) life expectancies provided by ERB's actuary. We decided to use these baseline assumptions to simplify the calculations and to ensure that the service and retirement calculations were as comparable as possible.

Finally, unless otherwise noted, all values are discounted to the present value of the year when each member entered retirement. As a result, the value of future pension payments are discounted to present values and contributions made prior to retirement reflect the appreciation of these values, which were invested by the fund upon receipt. The discount rate used was ERB's net inflation adjusted investment return as provided by the Plan's actuary. For the state worker analysis we focused solely on the State General Plan, which accounts for most of the state workers.

Wage and Salary Estimates for ERB and PERA Members

We were able to access payroll information for Elementary, Secondary and Post-Secondary workers (ERB) and State employees back to 1958 using Census Annual Survey of Public Employment & Payroll (ASPEP) data. Although teachers account for 2/3rds of workers in the Elementary & Secondary (E&S) group, the data includes all worker types including custodial, teacher's aids, secretaries, superintendents, etc. We used the same data source for payroll and employment information of New Mexico state government workers, who are PERA members, which includes classified workers as well as executive/exempt staff. Salaries were adjusted to 2018 dollars in order to compare years.

According to the estimates we derived based on the ASPEP, the average state worker made less than the average education worker at the beginning of the study period. Strong wage growth caused the average state worker to have higher wage salary earnings by the end of the study period while growth for education employees was roughly flat. (Figure 15)

We also estimated wage growth for teachers and their state employee equivalents (Education Administrators-Operational); what we found was that state workers also experienced greater wage growth since 1958, although annual salaries for these two groups began to converge by the early 1980's. (Figure 16)

Because a large percentage of teachers hold Master's degrees or higher, we compared wage growth for teachers using the pay structure for the Education Administrator-Advanced (EA-A) position, which recommends that incumbents hold at least a Master's degree; using the "Advanced" classification, the PERA equivalent employee would make more than the average teacher over time. This estimate suggests that the EA-A classification will experience significantly greater salary growth than the average teacher. (Figure 17) Although we were unable to verify the existence of these state job classifications prior to 2003 we thought it was important to include this alternative scenario.

Figure 15. Salary for ALL State Workers (Grey) and ALL ERB Workers (Red), 1958-2018

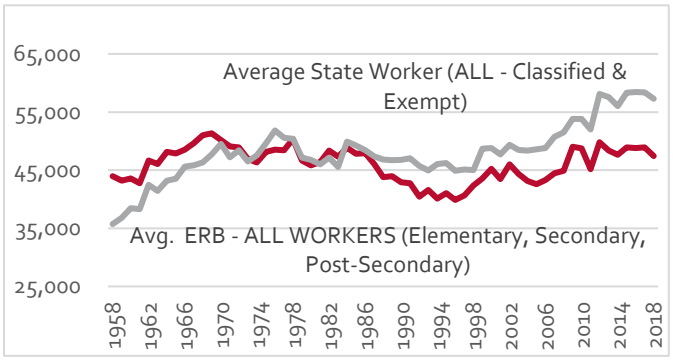


Figure 16. Average Salary: Education Admin-O (Grey) and Teacher (Red), 1958-2018

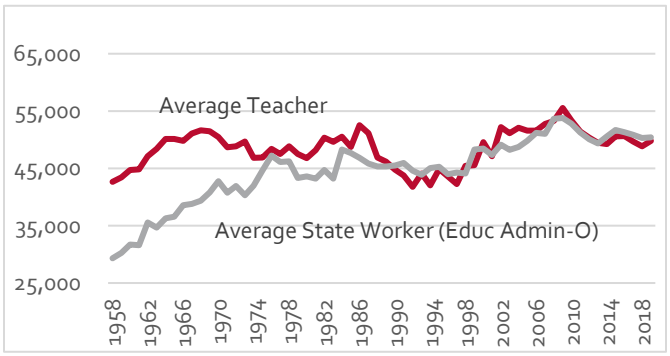
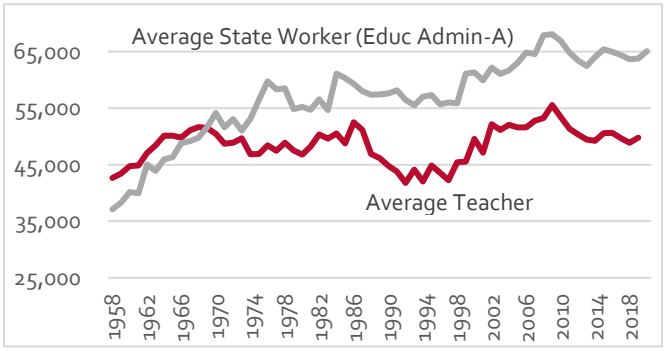


Figure 17. Average Salary: Education Admin-A (Grey) and Teacher (Red), 1958-2018



(Sources: UNM Bureau of Business & Economic Research; NM Public Education Department, Annual Financial Report (2003-2019); NM State Personnel Office Annual Compensation Report (2003-2018); U.S. Census (1958-2018).)

Detailed Results

Plan Participants Beginning Service in 1958

PERA employees beginning service in 1958 made more contributions to their Plan than ERB members contributed to their Plan on an absolute as well as a relative basis (a higher employee contribution rate) during their active years. PERA members also received more in pension benefits during retirement. The Pension/Employee Contributions ratio suggests that ERB members (2.64) received slightly more in benefits (relative to Employee Contributions) than PERA members (2.48). When considering employer contributions, PERA members (2.59) received significantly more than ERB members (1.92). Comparing averaging annual pension payments, PERA received $36,000 compared to $27,000 for the ERB member.

Given that the Multiplier, the Years of Service, and the Final Average Salary for the PERA and ERB member are roughly the same, one might expect the pension benefits to be equivalent, however, the PERA member earned $28,000 more in retirement (net of employee contributions). The differential is attributable to the higher COLA received by PERA members during their retirement years -- 2.92% compared to 1.72% for ERB. The shorter required wait period to begin receiving the Cost of Living Adjustment was also a factor given that the PERA member started receiving a COLA after 2 years, while the ERB member was required to wait 14 years, and given that the average PERA COLA rate was roughly 1.2% higher than ERB's, the PERA retiree experienced greater pension growth and more in pension payments despite both retirees starting out with comparable annual pension payments at the start of their retirements. (Figure 18)

Figure 18. Average Education Worker & Average State Worker (1958)

1958	PERA	ERB	Diff.
Cum. Career Salary*	1,139,086	1,236,890	(97,804)
Cum. Career Salary Net of Employee Contributions (EC)	985,782	1,116,494	(130,712)
Cum. Career Salary + Cum. Pension - Employee Contributions	1,365,369	1,434,857	(69,487)
Contributions**			
Employee Contributions	153,303	120,396	32,907
Employer Contributions	146,565	165,690	(19,125)
Total Contributions	299,868	286,086	13,782
Retirement Benefits**			
COLA Payments	88,819	14,847	73,972
Pension Net of COLA	290,768	303,516	(12,748)
Pension	379,587	318,363	61,224
Pension - Employee Contributions	226,284	197,967	28,317
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	2.92%	1.72%	1.20%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	29	17	12 years
Multiplier	2.00%	2.00%	0.00%
Years of Service	25	26	1
Average Salary over Career	45,375	47,530	(2,155)
Average Annual Pension	36,021	27,375	8,646
Final Average Salary(FAS)	46,534	47,355	(821)
1st Annual Pension Payment	23,267	24,624	(1,358)
Life Expectancy	82	82	-
Key Ratios			
Pension/Employee Contributions	2.48	2.64	-
Pension/Employer Contributions	2.59	1.92	-
Pension/Total Contributions	1.27	1.11	-
Pension Net EE Contrib/Avg Career Salary	4.99	4.17	-
1st Annual Pension Payment/FAS*	0.50	0.52	-
Final Ann. Pension Payment/1st Ann. Pension*	2.33	1.26	-
Final Ann. Pension/FAS*	1.17	0.66	-
COLA/Total Pension	0.23	0.05	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

The second comparison considers average teacher salaries and a typical state employee with comparable education and experience. The closest state worker classification to a public school teacher we found was the Education Administrator-Operational position (EA-O), which requires the incumbent to have a Bachelor's degree in Education and a background in education. Although the findings are similar to what we found when considering the average ERB worker, a key difference is that teachers experienced stronger salary growth during their active years than the average non-teacher ERB member. The results of this comparison follow.

As was the case with the average (All Classified & Exempt) worker comparison, the PERA Education Administrator-O retiree received more in pension payments on an absolute basis, however, the results are more nuanced on a relative basis. In particular, the Pension/Employee Contribution ratio for the PERA retiree was 2.68, which was roughly in line with the ERB teacher retiree's 2.71. In contrast, PERA's Pension/Employer Contribution ratio (2.78) is significantly higher than ERB's (1.97).

Although both retirees started out with comparable annual pension payments at the start of their retirements, the PERA retiree experienced greater pension growth and more in cumulative pension payments.

The teacher exhibited a higher average annual career salary ($48,300) than that earned by the EA-O worker ($39,700), however, the teacher made less in retirement with an average annual pension of $28,388 compared to $33,751 for the PERA retiree. Factors that contributed to these variances was that the PERA member experienced stronger salary growth over her career, received a higher COLA, and experienced a shorter wait period to begin receiving the COLA. Specifically, the average COLA received by PERA was 2.92% compared to 1.72% for ERB, a difference of 1.2%, and the PERA member started receiving a COLA after 2 years of retirement while the ERB member was required to wait until 14 years after initial retirement.

Figure 19. Average Teacher and Average Education Administrator-Operational (1958)

1958	PERA	ERB	Diff.
Cum. Career Salary*	997,221	1,257,987	(260,766)
Cum. Career Salary Net of Employee Contributions (EC)	864,373	1,135,604	(271,231)
Cum. Career Salary + Cum. Pension - Employee Contributions	1,220,042	1,467,746	(247,704)
Contributions**			
Employee Contributions	132,848	122,383	10,465
Employer Contributions	128,102	168,262	(40,159.83)
Total Contributions	260,951	290,645	(29,694)
Retirement Benefits**			
COLA Payments	83,222	15,489	67,733
Pension Net of COLA	272,447	316,652	(44,205)
Pension	355,669	332,142	23,528
Pension - Employee Contributions	222,821	209,759	13,062
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	2.92%	1.72%	1.2%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	29	17	12 years
Multiplier	2.00%	2.00%	0.0%
Years of Service	25	26	(1)
Average Salary over Career	39,749	48,318	(8,569)
Average Annual Pension	33,751	28,388	5,363
Final Average Salary(FAS)	43,601	49,108	(5,506)
1st Annual Pension Payment	21,801	25,536	(3,735)
Life Expectancy	82	82	-
Key Ratios			
Pension/EE Contributions	2.68	2.71	-
Pension/Employer Contributions	2.78	1.97	-
Pension/Total Contributions	1.36	1.14	-
Pension Net EE Contrib/Avg Career Salary	5.61	4.34	-
1st Annual Pension Payment/FAS	0.50	0.52	-
Final Ann. Pension Payment/1st Ann. Pension*	2.33	1.36	-
Final Ann. Pension/FAS	1.17	0.71	-
COLA/Total Pension	0.23	0.05	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

The third worker comparison also considers the average teacher alongside a typical state employee with comparable education and experience, however, the state classification used in this third comparison is the Education Administrator-Advanced (EA-A). Given that more than half of teachers hold an advanced degree, we think the EA-A comparison is fair given the comparable preferred educational experiences and the commensurate higher pay. As expected, the ratios are unchanged for both PERA and ERB. The key differences with the EA-O comparison is a greater differential in the average annual pension of $42,700 compared to $28,300 for the average teacher, caused by the slightly higher average career salary of $50,800 compared to

$48,300 (ERB). The ratios are the same as those for the EA-O comparison and the explaining factors related to COLA apply to this comparison. (Figure 20)

Figure 20. Average Teacher and Average Education Administrator-Advanced (1958)

1958	PERA	ERB	Diff.
Cum. Career Salary*	1,262,141	1,257,987	4,154
Cum. Career Salary Net of Employee Contributions (EC)	1,095,922	1,135,604	(39,682)
Cum. Career Salary + Cum. Pension - Employee Contributions	1,546,078	1,467,746	78,332
Contributions**			
Employee Contributions	166,219	122,383	43,836
Employer Contributions	159,572	168,262	(8,690)
Total Contributions	325,791	290,645	35,146
Retirement Benefits**			
COLA Payments	105,331	15,489	89,842
Pension Net of COLA	344,825	316,652	28,172
Pension	450,156	332,142	118,014
Pension - Employee Contributions	283,937	209,759	74,178
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	2.92%	1.72%	1.20%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	29	17	12 years
Multiplier	2.00%	2.00%	-
Years of Service	25	26	(1)
Average Salary over Career	50,837	48,318	2,519
Average Annual Pension	42,718	28,388	14,329
Final Average Salary(FAS)	55,184	49,108	6,077
1st Annual Pension Payment	27,592	25,536	2,056
Life Expectancy	82	82	-
Key Ratios			
Pension/Employee Contributions	2.71	2.71	-
Pension/Employer Contributions	2.82	1.97	-
Pension/Total Contributions	1.38	1.14	-
Pension Net EE Contrib/Avg Career Salary	5.59	4.34	-
1st Annual Pension Payment/FAS*	0.50	0.52	-
Final Ann. Pension Payment/1st Ann. Pension*	2.33	1.36	-
Final Ann. Pension/FAS*	1.17	0.71	-
COLA/Total Pension	0.23	0.05	-

*Inflation adjusted $-dollars.

**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

Plan Participants Beginning Service in 1978

The next cohort under consideration begins in 1978 with members from both plans working for 25 years, and retiring in 2003. Starting with the average All Classified & Exempt state worker and average Education worker comparison, we found that state worker experienced greater career earnings, with an average annual salary of $47,100 compared to $44,500 for the ERB worker. Despite lower pay ERB's higher contribution rates caused this member to make more contributions towards her retirement on an absolute basis as well as a percentage of her annual salary. In retirement the ERB member averaged an annual pension of $29,000 compared to $50,600 for the PERA retiree. The Pension/Employee contributions ratio for PERA of 3.1 compared to 1.7 for ERB, suggests that the PERA retiree received markedly more relative to their contributions. The 8.3 ratio for Pension (Net of Employee Contributions)/Average Career Salary suggests that the PERA retiree still received more in pension payments even when controlling for differential annual salaries for the two members during their active years (the ratio for the ERB member was 3.1). One of the most critical factors for the variance in pension benefits was that PERA had increased the retirement multiplier to 3% for members belonging to this cohort while ERB multiplier was 2.35%. The larger multiplier caused the PERA retiree to have a higher starting annual pension, while the shorter wait period to receive the COLA and the slightly higher average COLA caused the differential between the two pensions to increase over time. (Figure 21)

Figure 21. Average Education Worker & Average State Worker (1978)

1978	PERA	ERB	Diff.
Cum. Career Salary*	1,177,010	1,110,569	66,441
Cum. Career Salary Net of Employee Contributions (EC)	993,835	901,006	92,829
Cum. Career Salary + Cum. Pension -Employee Contributions	1,567,647	1,249,301	318,346
Contributions**			
Employee Contributions	183,175	209,563	(26,388)
Employer Contributions	328,175	272,162	56,013
Total Contributions	511,350	481,726	29,625
Retirement Benefits**			
COLA Payments	109,178	14,152	95,026
Pension Net of COLA	464,634	334,142	130,491
Pension	573,812	348,295	225,518
Pension - Employee Contributions	390,637	138,731	251,906
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.63%	1.46%	0.16%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	32	20	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	47,171	44,536	2,636
Average Annual Pension	50,638	28,994	21,644
Final Average Salary(FAS)	48,510	44,535	3,975
1st Annual Pension Payment	36,382	26,164	10,218
Life Expectancy	85	85	-
Key Ratios			
Pension/Employee Contributions	3.13	1.66	-
Pension/Employer Contributions	1.75	1.28	-
Pension/Total Contributions	1.12	0.72	-
Pension Net EE Contrib/Avg Career Salary	8.28	3.12	-
1st Annual Pension Payment/FAS*	0.75	0.59	-
Final Ann. Pension Payment/1st Ann. Pension*	1.77	1.36	-
Final Ann. Pension/FAS*	1.33	0.63	-
COLA/Total Pension	0.19	0.04	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

When comparing the 1978 cohort of the average teacher and EA-O worker types, the lifetime salary earnings and the annual average salary are closely comparable under both plans. The average ERB member had lifetime salary earnings of $1,175,500 and an annual average salary of $47,000, while the PERA member earned $1,140,000 and $45,700, respectively. Despite the slightly higher lifetime and average annual salary earnings, in retirement the ERB member's annual pension benefit payment averaged $32,000 compared to $50,300 for the PERA member. The fact that the ERB member paid more in their active years but received less in pension benefits is evidenced by the Pension/Employee Contribution ratio, which yielded 3.25 for the PERA member compared to the 1.77 for ERB. (Figure 22)

Figure 22. Average Teacher and Average Education Administrator-Operational (1978)

1978	PERA	ERB	Diff.
Cum. Career Salary*	1,140,327	1,175,543	(35,216)
Cum. Career Salary Net of Employee Contributions (EC)	964,742	958,298	6,444
Cum. Career Salary + Cum. Pension - Employee Contributions	1,535,432	1,342,355	193,077
Contributions**			
Employee Contributions	175,585	217,245	(41,660)
Employer Contributions	316,948	279,644	37,304
Total Contributions	492,533	496,889	(4,356)
Retirement Benefits**			
COLA Payments	108,584	15,605	92,979
Pension Net of COLA	462,106	368,452	93,654
Pension	570,690	384,057	186,633
Pension - Employee Contributions	395,105	166,812	228,292
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.63%	1.46%	0.2%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	32	20	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	45,676	47,136	(1,461)
Average Annual Pension	50,362	31,971	18,391
Final Average Salary(FAS)	48,246	49,108	(862)
1st Annual Pension Payment	36,184	28,851	7,333
Life Expectancy	85	85	-
Key Ratios			
Pension/Employee Contributions	3.25	1.77	-
Pension/Employer Contributions	1.80	1.37	-
Pension/Total Contributions	1.16	0.77	-
Pension Net EE Contrib/Avg Career Salary	8.65	3.54	-
1st Annual Pension Payment/FAS	0.75	0.59	-
Final Ann. Pension Payment/1st Ann. Pension*	1.77	1.00	-
Final Ann. Pension/FAS	1.33	0.59	-
COLA/Total Pension	0.19	0.04	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

When considering pay for the Education Administrator-A compared to the average teacher the results are roughly the same as the EA-O comparison except the disparities in active and retirement earnings are greater for the PERA member. Specifically, the lifetime earnings are $1,443,200 for PERA compared to $1,175,500 for the ERB member, with annual average pension benefits of $65,100 and $32,000, respectively. (Figure 23)

Figure 23. Average Teacher and Average Education Administrator-Advanced (1978)

1978	PERA	ERB	Diff.
Cum. Career Salary*	1,443,264	1,175,543	267,722
Cum. Career Salary Net of Employee Contributions (EC)	1,221,033	958,298	262,736
Cum. Career Salary + Cum. Pension - Employee Contributions	1,950,589	1,342,355	608,234
Contributions**			
Employee Contributions	222,231	217,245	4,986
Employer Contributions	401,148	279,644	121,504
Total Contributions	623,379	496,889	126,490
Retirement Benefits**			
COLA Payments	144,688	15,605	129,083
Pension Net of COLA	584,868	368,452	216,416
Pension	729,556	384,057	345,498
Pension - Employee Contributions	507,325	166,812	340,512
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.63%	1.46%	0.16%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	32	20	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	57,810	47,136	10,673
Average Annual Pension	65,119	31,971	33,148
Final Average Salary(FAS)	61,063	49,108	11,955
1st Annual Pension Payment	45,797	28,851	16,946
Life Expectancy	85	85	-
Key Ratios			
Pension/Employee Contributions	3.28	1.77	-
Pension/Employer Contributions	1.82	1.37	-
Pension/Total Contributions	1.17	0.77	-
Pension Net EE Contrib/Avg Career Salary	2.28	3.54	-
1st Annual Pension Payment/FAS*	0.75	0.59	-
Final Ann. Pension Payment/1st Ann. Pension*	1.84	1.00	-
Final Ann. Pension/FAS*	1.38	0.59	-
COLA/Total Pension	0.20	0.04	-

*Inflation adjusted $-dollars.

**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

Plan Participants Beginning Service in 1998

The next cohort started service in 1998 and will work until retirement in 2023. The employee contribution rates increased for both Plans, over the 1958 cohort's, however, ERB's was slightly ahead of PERA's during the active years. Although the ERB member contributed a larger percentage of their earnings toward their retirement, the

PERA member lifetime pension earnings ($635,200) were 1.68x that of the ERB member ($379,000). The average annual pension payments for the two retirees tells a similar story with the PERA retiree earning $54,500 compared to $31,400 for the ERB retiree. The Pension/Employee Contribution ratio for PERA (2.18) also suggests that PERA's pension benefit (relative to what they contributed) was more generous than ERB's (1.39).

PERA's multiplier of 3% -- compared to 2.35% for ERB -- allowed its member to retire with a higher pension benefit, and the greater career salary earnings growth for the PERA member -- $53,600 annual career salary compared to $46,400 for the ERB member – caused the differential in the initial annual pension to be even larger. Although the average ERB COLA rate is expected to be slightly higher for the duration of this cohort's retirement, the longer wait period means fewer years for pension increases to compound. (Figure 24)

Figure 24. Average Education Worker & Average State Worker (1998)

1998	PERA	ERB	Diff.
Cum. Career Salary*	1,335,015	1,158,816	176,198
Cum. Career Salary Net of Employee Contributions (EC)	1,043,841	885,287	158,553
Cum. Career Salary + Cum. Pension -Employee Contributions	1,679,067	1,264,344	414,723
Contributions**			
Employee Contributions	291,174	273,529	17,645
Employer Contributions	594,431	328,825	265,606
Total Contributions	885,605	602,354	283,251
Retirement Benefits**			
COLA Payments	77,477	16,637	60,840
Pension Net of COLA	557,749	362,419	195,330
Pension	635,227	379,056	256,170
Pension - Employee Contributions	344,052	105,528	238,525
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.38%	1.44%	-0.06%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	35	23	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	53,646	46,455	7,191
Average Annual Pension	54,503	31,460	23,043
Final Average Salary(FAS)	57,265	47,502	9,763
1st Annual Pension Payment	42,949	27,908	15,041
Life Expectancy	88	88	-
Key Ratios			
Pension/Employee Contributions	2.18	1.39	-
Pension/Employer Contributions	1.07	1.15	-
Pension/Total Contributions	0.72	0.63	-
Pension Net EE Contrib/Avg Career Salary	6.41	2.27	-
1st Annual Pension Payment/FAS*	0.75	0.59	-
Final Ann. Pension Payment/1st Ann. Pension*	1.62	1.41	-
Final Ann. Pension/FAS*	1.21	0.83	-
COLA/Total Pension	0.12	0.04	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: NM Public Employees Retirement Association and NM Education Retirement Board.)

The active career earnings for the Education Administrator-O and the average teacher are roughly equivalent in terms of lifetime earnings: $1,262,600 (teacher) and $1,260,300 (Educ. Admin-O). Although the ERB member paid more in employee contributions ($300,600) compared to $280,200 for PERA, the average annual pension for the ERB member was $33,000 compared to $49,000 for PERA. The Pension/Employee Contribution ratio of 2.04 for PERA compared to 1.32 for ERB and the Pension (Net of Contributions)/Average Career Salary comparison (5.77 compared to 1.92) suggests that the PERA member received substantially more in pension benefits relative to their respective employee contributions, even when controlling for salary variances. (Figure 25)

Figure 25. Average Teacher and Average Education Administrator-Operational (1998)

1998	PERA	ERB	Diff.
Cum. Career Salary*	1,260,382	1,262,647	(2,265)
Cum. Career Salary Net of Employee Contributions (EC)	980,174	962,036	18,139
Cum. Career Salary + Cum. Pension - Employee Contributions	1,550,643	1,359,300	191,343
Contributions**			
Employee Contributions	280,208	300,611	(20,404)
Employer Contributions	575,561	361,610	213,951
Total Contributions	855,769	662,221	193,547
Retirement Benefits**			
COLA Payments	69,579	17,436	52,143
Pension Net of COLA	500,890	379,828	121,061
Pension	570,468	397,264	173,204
Pension - Employee Contributions	290,261	96,653	193,608
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.38%	1.44%	-0.1%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	35	23	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	50,314	50,395	(81)
Average Annual Pension	48,947	32,971	15,976
Final Average Salary(FAS)	51,427	49,784	1,643
1st Annual Pension Payment	38,570	29,248	9,322
Life Expectancy	88	88	-
Key Ratios			
Pension/Employee Contributions	2.04	1.32	-
Pension/Employer Contributions	0.99	1.10	-
Pension/Total Contributions	0.67	0.60	-
Pension Net EE Contrib/Avg Career Salary	5.77	1.92	-
1st Annual Pension Payment/FAS	0.77	0.57	-
Final Ann. Pension Payment/1st Ann. Pension*	1.62	1.41	-
Final Ann. Pension/FAS	1.21	0.83	-
COLA/Total Pension	0.12	0.04	

*Inflation adjusted $-dollars.

**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

When considering pay for the Education Administrator-A to the average teacher the results are roughly the same as the EA-O comparison, except the disparities in active and retirement earnings are greater for the PERA member. Specifically, the lifetime earnings are $1,595,200 for the PERA member compared to $1,262,600 for the ERB member with average annual pension benefits of $62,000 under PERA and $33,000 under ERB. (Figure 26)

Figure 26. Average Teacher and Average Education Administrator-Advanced (1998)

1998	PERA	ERB	Diff.
Cum. Career Salary*	1,595,213	1,262,647	332,566
Cum. Career Salary Net of Employee Contributions (EC)	1,240,566	962,036	278,530
Cum. Career Salary + Cum. Pension - Employee Contributions	1,962,584	1,359,300	603,284
Contributions**			
Employee Contributions	354,647	300,611	54,036
Employer Contributions	728,463	361,610	366,854
Total Contributions	1,083,110	662,221	420,889
Retirement Benefits**			
COLA Payments	88,063	17,436	70,627
Pension Net of COLA	633,955	379,828	254,127
Pension	722,018	397,264	324,754
Pension - Employee Contributions	367,371	96,653	270,718
Retirement Benefits**			
Average COLA	1.38%	1.44%	-0.06%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	35	23	12 years
Multiplier	2.35%	3.00%	-0.65%
Years of Service	25	25	-
Average Salary over Career	63,680	50,395	13,285
Average Annual Pension	61,950	32,971	28,979
Final Average Salary(FAS)	65,089	49,784	15,305
1st Annual Pension Payment	48,817	29,248	19,569
Life Expectancy	88	88	-
Key Ratios			
Pension/Employee Contributions	2.04	1.32	-
Pension/Employer Contributions	0.99	1.10	-
Pension/Total Contributions	0.67	0.60	-
Pension Net EE Contrib/Avg Career Salary	5.77	1.92	-
1st Annual Pension Payment/FAS*	0.75	0.57	-
Final Ann. Pension Payment/1st Ann. Pension*	1.62	1.41	-
Final Ann. Pension/FAS*	1.21	0.83	-
COLA/Total Pension	0.12	0.04	

*Inflation adjusted $-dollars.

**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

Plan Participants Beginning Service in 2018

By the time members in the 2018 cohort began their careers, both Plan Sponsors had made a series of changes to member pension benefits. Most importantly, PERA reduced the benefit multiplier to 2.5%, or 0.15% higher than ERB's 2.35%. Both Plans also cut their COLA's, making them contingent on investment returns and the funding status of the plan. Both plans also implemented new rules that ensured that typical members could not retire until they served 30 years. Both plans implemented a series of contribution increases in the last decade. By the time all these increases take effect, the PERA employee contribution rate will be only slightly higher at 10.92%, compared to 10.70% for ERB; the PERA employer contribution will be considerably higher at 19.24%, compared to 14.15% for ERB; the combined employee/employer rates for PERA (30.16%) will be more than 5% higher than ERB (24.85%). These changes were targeted at ensuring adequate assets to cover the benefits of retirees but also to improve the funding ratio of the Plans.

Under these new rates the PERA members will make slightly larger contributions towards their pensions (as a percentage of their earnings during their active years) and they will also receive more in pension benefits than the ERB members. The Pension/Employee Contributions ratio for PERA (0.97) compared to ERB (0.83) probably best illustrates this. The higher average career salary but also the higher multiplier for the PERA retiree will contribute to this retiree earning an annual pension of $52,900 compared to $37,850 for the ERB retiree. Despite the slightly lower expected average COLA for PERA, the fact that their member can begin receiving one after two years ensures greater growth in earnings over their retirement. (Figure 27)

Figure 27. Average Education Worker & Average State Worker (2018)

2018	PERA	ERB	Diff.
Cum. Career Salary*	1,717,946	1,425,023	292,923
Cum. Career Salary Net of Employee Contributions (EC)	1,084,286	882,102	202,183
Cum. Career Salary + Cum. Pension -Employee Contributions	1,699,642	1,331,019	368,623
Contributions**			
Employee Contributions	633,661	542,921	90,740
Employer Contributions	1,140,845	716,503	424,341
Total Contributions	1,774,505	1,259,424	515,081
Retirement Benefits**			
COLA Payments	70,422	24,006	46,416
Pension Net of COLA	544,934	424,910	120,024
Pension	615,356	448,917	166,440
Pension - Employee Contributions	(18,304)	(94,004)	75,700
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.38%	1.44%	0.06%
COLA Deferral Period	2 years	Age 67	
Years Receiving COLA	31	22	9 years
Multiplier	2.50%	2.35%	0.15%
Years of Service	30	30	-
Average Salary over Career	57,265	47,499	9,765
Average Annual Pension	52,917	37,850	15,067
Final Average Salary(FAS)	57,265	47,502	9,763
1st Annual Pension Payment	42,949	33,489	9,460
Life Expectancy	89	89	-
Key Ratios			
Pension/Employee Contributions	0.97	0.83	-
Pension/Employer Contributions	0.54	0.63	-
Pension/Total Contributions	0.35	0.36	-
Pension Net EE Contrib/Avg Career Salary	-0.32	-1.98	-
1st Annual Pension Payment/FAS*	0.75	0.71	-
Final Ann. Pension Payment/1st Ann. Pension Payment*	1.53	1.39	-
Final Ann. Pension/FAS*	1.15	0.98	-
COLA/Total Pension	0.11	0.05	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

Under this scenario the average teacher's annual salary ($49,800) and lifetime ($1,493,000) earnings lags the Education Administrator-O only slightly ($1,541,200 and $51,400). During retirement the ERB member lags with an annual average pension benefit of $39,700 compared to $47,500 for the PERA member. The key ratios are the most comparable between these two worker types suggesting that key structural differences in the benefits are narrower. Still PERA's larger multiplier and shorter waiting period for the COLA are critical factors causing the PERA member to receive larger pensions and to experience greater pension benefit growth during retirement. (Figure 28)

Figure 28. Average Teacher and Average Education Administrator-Operational (2018)

2018	PERA	ERB	Diff.
Cum. Career Salary*	1,541,211	1,493,055	48,155
Cum. Career Salary Net of Employee Contributions (EC)	973,328.90	924,439	48,890
Cum. Career Salary + Cum. Pension - Employee Contributions	1,525,953	1,394,920	131,033
Contributions**			
Employee Contributions	567,882	568,616	(734)
Employer Contributions	1,022,293	750,422	271,871
Total Contributions	1,590,175	1,319,038	271,137
Retirement Benefits**			
COLA Payments	63,243	25,159	38,084
Pension Net of COLA	489,381	445,321	44,060
Pension	552,624	470,481	82,143
Pension - Employee Contributions	(15,258)	(98,136)	82,878
Salary, Multiplier, COLA and Other Inputs*			
Average COLA	1.38%	1.44%	-0.1%
COLA Deferral Period	2 years	Age 67	-
Years Receiving COLA	31	22	9 years
Multiplier	2.50%	2.35%	0.15%
Years of Service	30	30	-
Average Salary over Career	51,393	49,784	1,609
Average Annual Pension	47,523	39,668	7,854
Final Average Salary(FAS)	51,427	49,784	1,643
1st Annual Pension Payment	38,570	35,098	3,473
Life Expectancy	89	89	-
Key Ratios			
Pension/Employee Contributions	0.97	0.83	-
Pension/Employer Contributions	0.54	0.63	-
Pension/Total Contributions	0.35	0.36	-
Pension Net EE Contrib/Avg Career Salary	-0.30	-1.97	-
1st Annual Pension Payment/FAS*	0.75	0.71	-
Final Ann. Pension Payment/1st Ann. Pension Payment*	1.53	1.39	-
Final Ann. Pension/FAS*	1.15	0.98	-
COLA/Total Pension	0.11	0.05	-

*Inflation adjusted $-dollars.
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

Under this final scenario the differential between the Education Administrator-A (lifetime career earnings $1,950,646 and $65,000 average annual career salary) and the teacher's lifetime earnings ($1,493,000) and average annual career salary ($49,800) are significant. Under this scenario, the higher paid EA-A causes the PERA differential over ERB to be even greater during retirement with an annual average pension of $60,100 compared to $39,700 for ERB. As expected, the key ratios are the most comparable between these two worker types suggesting that differences in the benefits are narrower. (Figure 29)

Figure 29. Average Teacher and Average Education Administrator-Advanced (2018)

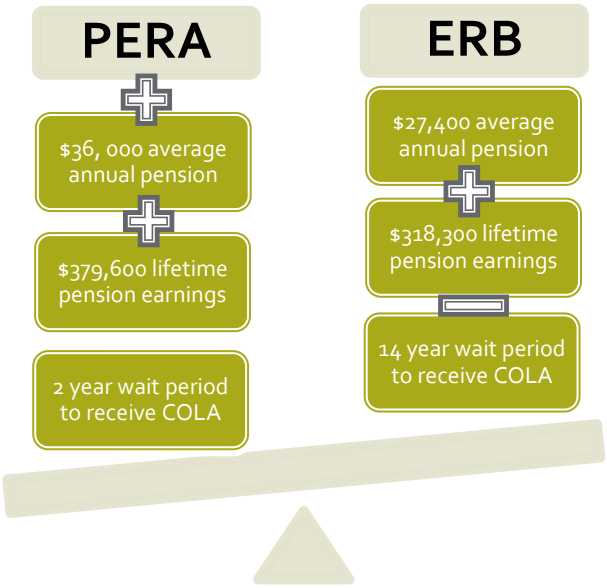
2018	PERA	ERB	Diff.
Cum. Career Salary*	1,950,646	1,493,055	457,591
Cum. Career Salary Net of Employee Contributions (EC)	1,231,902	924,439	307,462
Cum. Career Salary + Cum. Pension - Employee Contributions	1,931,334	1,394,920	536,415
Contributions**			
Employee Contributions	718,744	568,616	150,128
Employer Contributions	1,293,874	750,422	543,451
Total Contributions	2,012,618	1,319,038	693,580
Retirement Benefits**			
COLA Payments	80,044	25,159	54,885
Pension Net of COLA	619,389	445,321	174,068
Pension	699,433	470,481	228,952
Pension - Employee Contributions	(19,311)	(98,136)	78,824
Retirement Benefits**			
Average COLA	1.38%	1.44%	-0.06%
COLA Deferral Period	2 years	Age 67	
Years Receiving COLA	31	22	9 years
Multiplier	2.50%	2.35%	0.15%
Years of Service	30	30	-
Average Salary over Career	65,000	49,784	15,216
Average Annual Pension	60,148	39,668	20,479
Final Average Salary(FAS)	65,089	49,784	15,305
1st Annual Pension Payment	48,817	35,098	13,719
Life Expectancy	89	89	-
Key Ratios			
Pension/Employee Contributions	0.97	0.83	-
Pension/Employer Contributions	0.54	0.63	-
Pension/Total Contributions	0.35	0.36	-
Pension Net EE Contrib/Avg Career Salary	-0.30	-1.97	-
1st Annual Pension Payment/FAS*	0.75	0.71	-
Final Ann. Pension Payment/1st Ann. Pension Payment*	1.53	1.39	-
Final Ann. Pension/FAS*	1.15	0.98	-
COLA/Total Pension	0.11	0.05	-

*Inflation adjusted $-dollars.

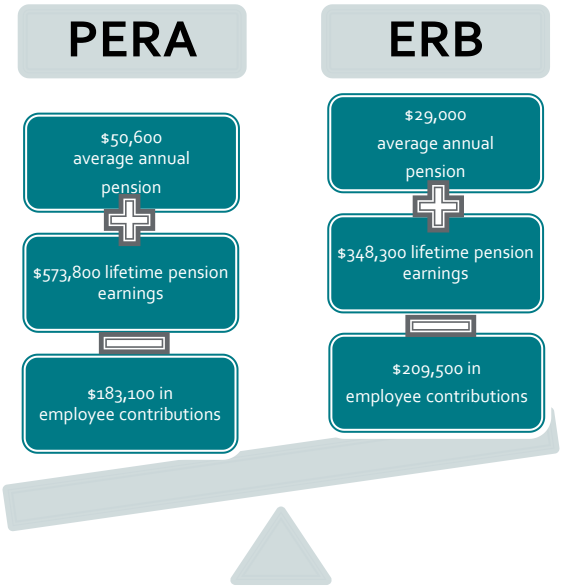
**Discounted, present value $-dollars.

(Source: UNM Bureau of Business & Economic Research; U.S. Census ASPEP)

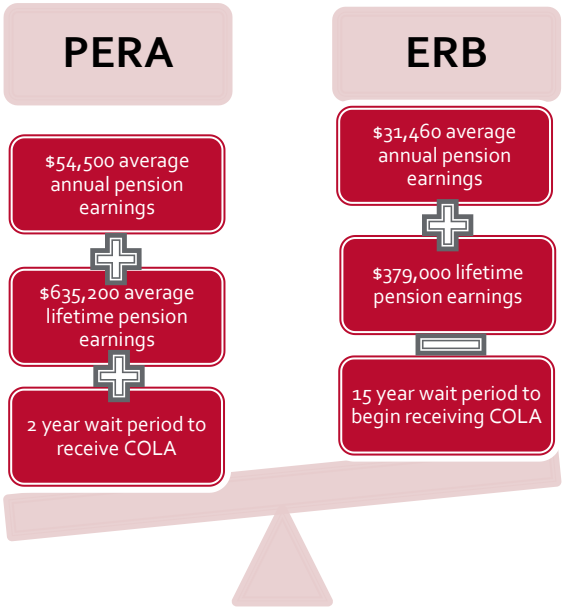
*The PERA retiree beginning service in **1958** experienced greater pension growth and received more in pension payments despite both retirees starting out with comparable average annual pension payments at the start of retirement. (Average State and Average ERB Worker)*



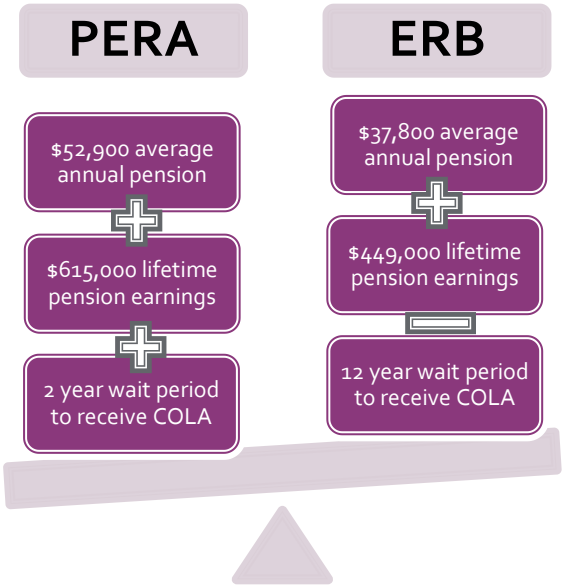
*For the **1978** cohort, PERA increased the retirement multiplier to 3% while the ERB multiplier was 2.35%. The larger multiplier caused the PERA retiree to have a higher starting annual pension, while the shorter wait period to receive the COLA and the slightly higher average COLA caused the differential between the two pensions to increase over time. (Average State and Average ERB Worker)*



*The average ERB COLA rate is expected to be slightly higher for the duration of the **1998** cohort's retirement but the longer wait period means fewer years for pension increases to be compounded. (Average State and Average ERB Worker)*



*By the time members in the **2018** cohort began their careers, both Plan Sponsors had made a series of changes in their pensions. By the time all take effect, the PERA employee contribution rate will be only slightly higher; the PERA employer contribution will be considerably higher; and the combined employee/employer rates for PERA will be more than 5% higher than ERB. (Average State and Average ERB Worker)*

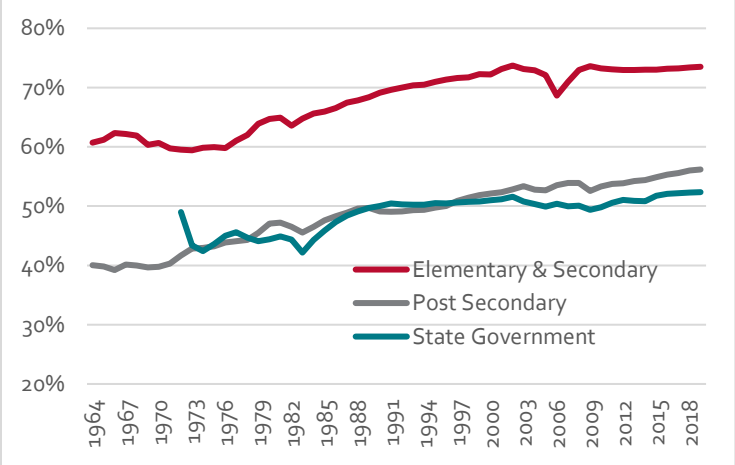


Gender and Compensation Data by Worker Type

ERB requested that BBER consider any available gender information for the participants of the two plans. We encountered only incomplete and inconsistent administrative data as it relates to the active and retired members. The secondary data we relied on for this analysis, U.S. Census and BLS, also did not provide us with the detailed state level occupational and compensation data by gender that we hoped to utilize for this section. Nevertheless, the Bureau of Labor Statistics tracks and reports U.S. employment and salary information by gender. This section reviews the national data, which is a reasonable proxy for New Mexico trends in lieu of the state-level information.

Historically Elementary & Secondary education professionals have been predominantly female. Using the earliest available Bureau of Labor Statistics data for the U.S., women accounted for 60% of Elementary & Secondary (E&S) jobs dating back to as early as 1964. This percentage has only grown since then with women accounting for nearly 74% by 2018.[11] The number of female Post-Secondary employees is more in-line with State Government trends. (Figure 30) Applying the national percentages to the state level, we can assume that at least three out of four K-12 public school employees in New Mexico, are women. Utilizing the BLS data, nationally women earned 83 cents for every $1 dollar earned by men as recently as 2019. The earnings gap has improved since the early 1980's when women earned 62 cents for every $1 their male counterparts received. (Figure 31) Although large gains have been made in the last several years, wage disparities persist particularly when controlling for differences in educational attainment.

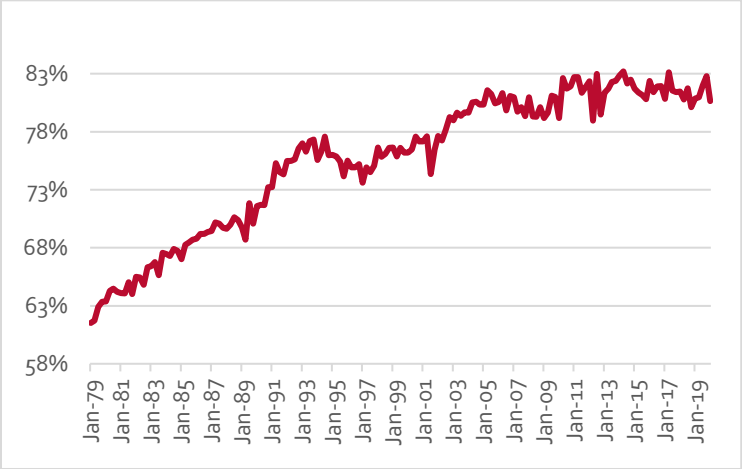
Figure 30. Female Employees as a Percent of Total (U.S.)



(Source: U.S. Bureau of Labor Statistics.)

[11] Teachers account for more than 2/3rds of E&S positions (68% in New Mexico) with Instructional, Library, and Media Assistants accounting for an additional 17%. (Source: NM Public Education Department, Budget and Finance Stats Book, 2018)

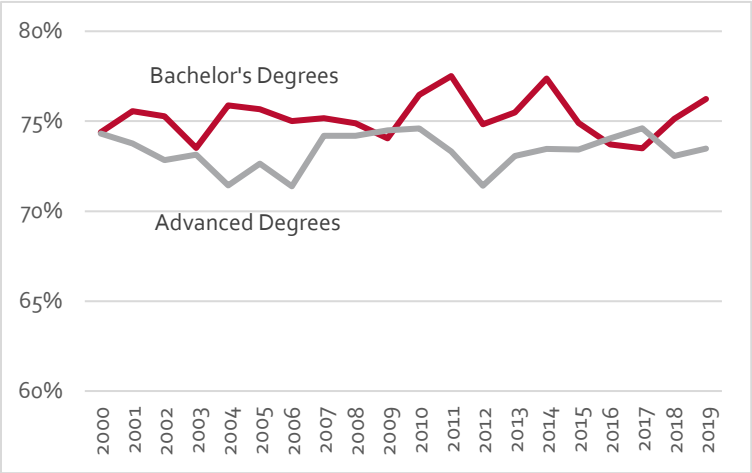
Figure 31. Women's Earnings Growth Relative to Men



(Source: U.S. Bureau of Labor Statistics.)

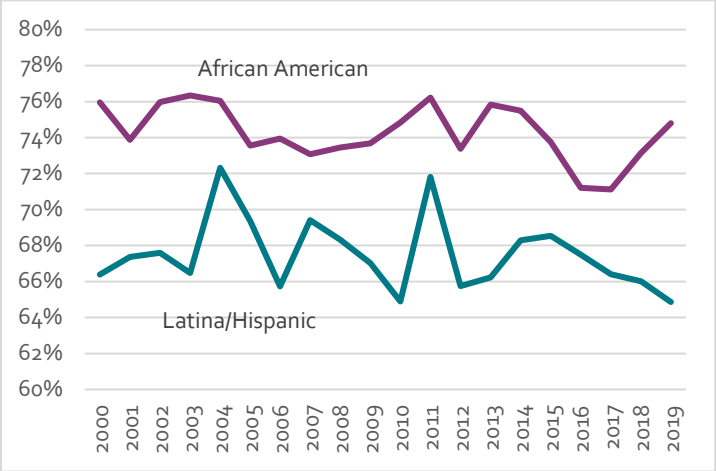
As Figure 32 illustrates, by 2018 women holding a Bachelor's degree made 24% less than their male counterparts and female advanced degree holders made 27% less than males with comparable educational attainment levels. These differentials become more marked for Latina/Hispanic women with Bachelor's degrees, who make 35% less than their counterparts. (Figure 33) Although we were unable to attain New Mexico compensation data by occupation and gender for this analysis, the national data raises important questions for ERB members not just in their active but also their retirement years. Although this study does not seek to comprehensively assess gender and demographic data between the two plans, it is our sense that equity discussions must also incorporate gender and gender disparities into the equation.

Figure 32. Male/Female Earnings Disparities, Controlling for Education



(Source: U.S. Bureau of Labor Statistics.)

Figure 33. Women's Earnings Relative to Men: Bachelor's Degrees



(Source: U.S. Bureau of Labor Statistics.)

Main Sources

New Mexico Higher Education Department, Report on Actuals

The New Mexico Higher Education Department (NMHED) was established in 2005 as a cabinet agency in the executive branch as a single, unified department to administer laws and exercise functions formerly administered and exercised by the commission on higher education. NMHED provides financial, academic, and policy oversight and support to the New Mexico public higher education institutions and formal community partners by providing financing to, oversight of, and support for all of the state's public universities, colleges, and state-sponsored adult education programs. The Institutional Finance Division (IFD) of NMHED is responsible for reviewing and approving the operating budgets of publicly funded Higher Education Institutions in New Mexico. The Division is also responsible for developing the Higher Education funding formula and for confirming that the Higher Education Institutions comply with all financial reporting requirements. The Institutional Finance Division utilizes the "Institutional Finance Running Schedule" which provides dates that fiscal documentation and data are due as required by state statutes and regulations. The data collected by NMHED from higher education institutions are the official source of data for public postsecondary education in New Mexico. Among the general uses of enrollment file data are: student enrollments student characteristics; remediation, retention and graduation rates; and data to be used to calculate the funding formula and NMHED annual reports. The Report of Actuals submitted by NM post-secondary institutions captures budget and financial data including employment and salary data by division and worker type.

New Mexico Public Education Department, Stat Book

The New Mexico Public Education Department (NMPED) is the state education agency responsible for the oversight of all elementary, secondary, and some 2-year post-secondary public institutions – and some private – in the state. Among NMPED's duties and responsibilities are: determine policy for the operation of all public schools and vocational education programs in the state; supervise all schools and school officials; prescribe courses of instruction to be taught in public schools in the state; set standards and requirements for graduation; provide technical assistance and assess and evaluate public schools for accreditation purposes; require and enforce periodic reporting; determine the qualifications for and issue licenses for educators according to law; approve education curricula; prepare and publish reporting on public and private education for distribution to the governor, legislature, and the general public. PED statistical reporting maintains a historical account of NM public school budgets, including statistics on membership, revenues, expenditures, personnel, and other data. Within NMPED, the School Budget & Finance Analysis Bureau is responsible for reviewing, analyzing, and approving charter and district budgets; monitors the distribution and use of annual General Fund appropriations; provides school finance information to the legislature, federal government, the general public and other interested parties; assists school districts with the development of appropriation recommendations; collects and analyzes student membership data; establishes local school district property tax levies. This study utilizes the Schedule F from the annual Stat Book, which publishes salary, demographic, and other school budget related information.

New Mexico State Personnel Office, Annual Compensation Reports

The State Personnel Board (SPB) rules require the SPB to annually adopt and submit a compensation report to the Governor and the Legislative Finance Committee (LFC) that includes a summary of the status of the classified pay system and the results of the State of New Mexico's (State) annual compensation survey that includes total compensation. The Annual Compensation Report conveys economic pay trends, findings, and data derived from the compensation and benefits surveys compiled by the National Compensation Association of State Governments and analyzed by the State Personnel Office (SPO). This data is analyzed in order to illustrate the salary ranges, rates, average salaries, and benefits for state classifications in the eight state comparator labor markets. The report also summarizes key findings and comparative data showing the relationship of the State's wages and compensation programs to those of the eight state comparator labor markets. Additionally, it presents data on state employee demographics, the use of available pay mechanisms, and industry-accepted workforce metrics for the enhancement of the classified service pay system.

U.S. Bureau of Labor Statistics Occupational Employment Statistics (OES)

The Occupational Employment Statistics (OES) program produces nonfarm employment and wage estimates annually for nearly 800 occupations. These estimates are available for the nation as a whole, for individual states, and for metropolitan and nonmetropolitan areas; national occupational estimates for specific industries are also available. The Bureau of Labor Statistics produces occupational employment and wage estimates for approximately 415 industry classifications to the 6-digit NAICS level. The OES survey began using the North American Industry Classification System (NAICS) in 2002. Prior to 1996, the OES program collected only occupational employment data for selected industries in each year of the three-year survey cycle, and produced only industry-specific estimates of occupational employment. The 1996 survey round was the first year that the OES program began collecting occupational employment and wage data in every state. In addition, the program's three-year survey cycle was modified to collect data from all covered industries each year.

U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

The Quarterly Census of Employment and Wages (QCEW) program publishes a quarterly count of employment and wages reported by employers covering more than 95 percent of U.S. jobs available at the county, Metropolitan Statistical Area (MSA), state and national levels by detailed industry. QCEW wages data represent the total compensation paid during the calendar quarter, regardless of when the services were performed. Under most state laws or regulations, wages include bonuses, stock options, severance pay, the cash value of meals and lodging, tips and other gratuities. In some states, wages also include employer contributions to certain deferred compensation plans, such as 401(k) plans. QCEW produces a comprehensive tabulation of data

on the number of establishments, monthly employment and quarterly wages for workers covered by State unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. These data are aggregated to many different levels, starting at the 6-digit NAICS industry level, to higher industry levels, and to higher geographic levels (MSA, State, and national). At the national level, the QCEW program publishes establishment, employment and wage data for nearly every NAICS industry. At the state, county and MSA level, the QCEW program publishes establishment, employment, and wage data down to the 6-digit NAICS industry level, if disclosure restrictions are met. Establishment counts and wage data are available quarterly and annually.

U.S. Census Annual Survey of Public Employment & Payroll (ASPEP)

The survey provides state and local government data on full-time and part-time employment, part-time hours worked, full-time equivalent employment, and payroll statistics by governmental function (i.e., elementary and secondary education, higher education, police protection, fire protection, financial administration, etc). Data have been collected annually since 1957 with the exception of 1996. A census is conducted every five years (years ending in '2' and '7'). A sample of state and local governments is used to collect data in the intervening years. A new sample is selected every five years (years ending in '4' and '9').