



Child Care

# **Early Childhood Education In the Pikes Peak Region: An Economic Perspective**

**MAY 2024**



## About the UCCS Economic Forum

The UCCS Economic Forum is a community resource for data and analysis to help citizens, businesses and civic leaders understand the economic and business conditions affecting the Pikes Peak Region and make better-informed decisions.



## About Joint Initiatives for Youth + Families

Jl's work centers on empowering individuals to advance a safe, healthy, and flourishing community by preventing, reducing, intervening, and solving the social problems when families have limited (or fragmented) access to thrive. JI leads the charge to bring over 60 different community organizations, local leaders, and government agencies to the table, working collaboratively to solve data-driven community issues embraced with an equity lens and collective impact focus.

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Youth + Families.



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## EXECUTIVE SUMMARY

**The Pikes Peak Region will face increased needs for Early Childhood Education (ECE) in the coming years as the population of young children is forecast to grow significantly, with an 18% increase in the population of 0-4-year-olds projected by 2041.**

This increased demand comes when supply is already lacking - the current number of licensed childcare places is already very low relative to the number of children in the region, with 2.8 0-4-year-olds per licensed childcare slot. Compared with other cities and the United States overall, the regional ECE workforce is small relative to the number of children; the number of ECE workers per 100 children under five in the Pikes Peak region is 3.4, compared with 5.2 in the US overall.

**Childcare costs are a significant burden on families.** The median cost of full-time childcare in the Pikes Peak Region ranges from 9% to 50% of the median household income, depending on childcare and family type. Long-run structural forces have caused ECE costs to increase at a rate more than 50% higher than overall inflation.

**Local employers face tight labor market conditions, with an unemployment rate that has averaged 0.5 percentage points lower than the US overall during the past five years.** The labor force participation rate for persons aged 25-54 in the Pikes Peak Region is 1.2 percentage points lower than the national rate. Labor market tightness may increase due to a declining ratio of the working-age to the retirement-age population. In Colorado, 11.8% of families of children aged 0-5 quit, didn't take, or significantly changed jobs due to childcare problems. Increased availability of Early Childhood Education could contribute to easing these pressures. ECE programs have been shown to increase labor force participation by mothers. The labor force participation rate for mothers of children under six in the Pikes Peak Region is 11.5 percentage points lower than nationwide. A 10 percentage point increase in this ratio could generate approximately \$96 million in additional income and raise local GDP by roughly \$223 million annually.

**Pre-Kindergarten has been tied to improved educational outcomes.** Benefits include cost-savings for school systems and higher high-school graduation and college matriculation rates. El Paso County's high school graduation rate is 8.8 percentage points lower than the US overall, and the college matriculation rate is below the national rate by 17.5 percentage points. Improved educational attainment would be associated with substantially higher productivity and income. Relative to high school graduates in the region, non-graduates face an earnings penalty of 6.8%, while the earnings premium associated with a college degree is 61.8%.

*In Colorado, 11.8% of families of children aged 0-5 quit, didn't take, or significantly changed jobs due to childcare problems. Increased availability of Early Childhood Education could contribute to easing these pressures.*





## INTRODUCTION

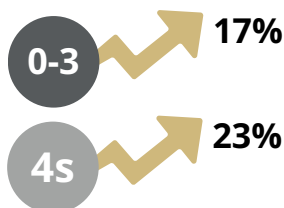
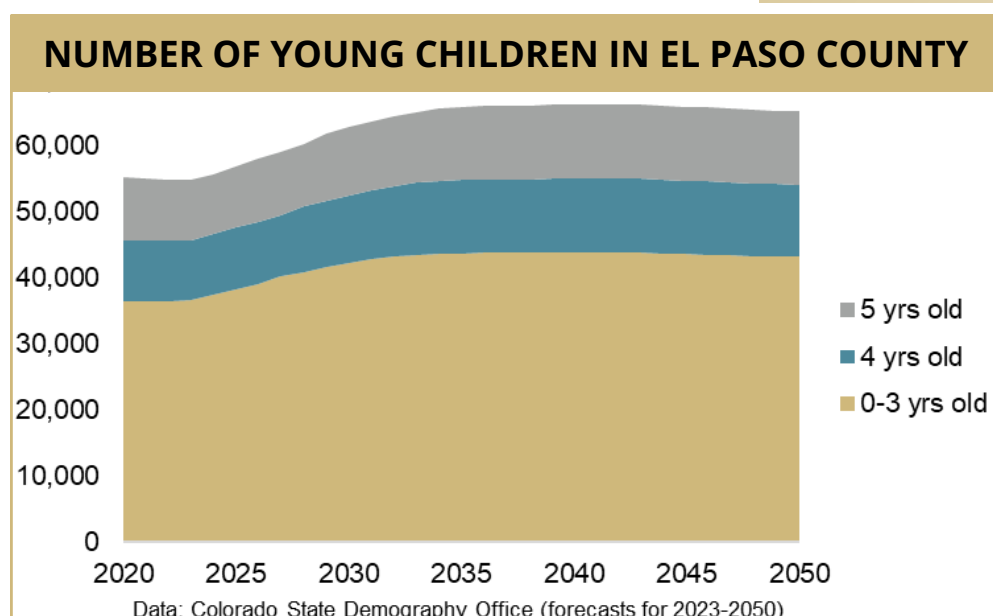
**This report examines the needs for and impact of early childhood education (ECE) in the Pikes Peak region.** ECE is the preferred term encompassing care and education services for young children often referred to as “childcare” and “preschool.” The report focuses on the Pikes Peak Region, with data for El Paso County or the Colorado Springs Metropolitan Statistical Area (MSA) comprised of El Paso and Teller Counties (all data in this report for “Colorado Springs” is for the Colorado Springs MSA). In some cases, comparison data are presented for other metro areas – Boise, Raleigh, Salt Lake City, and San Antonio were selected by the Colorado Springs Chamber & EDC as peer cities; Huntsville is cited as another similar-sized city with that is a center of military space operations, and Denver is included as the other large metro area in Colorado.

The next section examines **supply and demand**, with estimates of the relevant population as well as data on the number of licensed slots. The number of places available is currently greatly exceeded by the number of children in the region, and the population of young children is forecast to grow substantially between today and 2041. This is followed by **data on the ECE workforce**, which shows that the workforce relative to the number of children is lower here than in peer cities. The next section reports **data on the cost of ECE in the region**, which requires a significant share of household incomes. **Labor force impacts** are discussed next, with a brief overview of research findings on the impact of ECE on maternal labor force participation. Data is presented showing that the region lags its peers and the US overall in maternal labor force participation. This is followed by a discussion of the **potential impacts of Pre-Kindergarten and local data on some of the relevant outcomes**, including high school graduation and college matriculation, which are both low in the region.

## PROJECTED DEMAND AND CURRENT CAPACITY

With a currently large cohort of people aged 27-33 and expected continued population growth, the population of young children in the Pikes Peak Region is forecast to increase significantly in the coming years.

*The current availability of ECE falls short of needs - there are currently 2.8 children aged 0-4 for every licensed childcare place in El Paso County. Demand will grow significantly in the near future the population of 0-4-year-olds is forecast to increase by 18% by 2041.*



According to forecasts [1] According to the Colorado State Demography Office, the number of children aged 0-3 in El Paso County will increase by 17% between 2024 and 2041, and the number of 4-year-olds will peak in 2043 at a level 23% higher than in 2024.



**The total number of 0-4-year-olds is forecast to peak at 55,060 in 2041, an increase of 8,500 (18%) from 2024.**

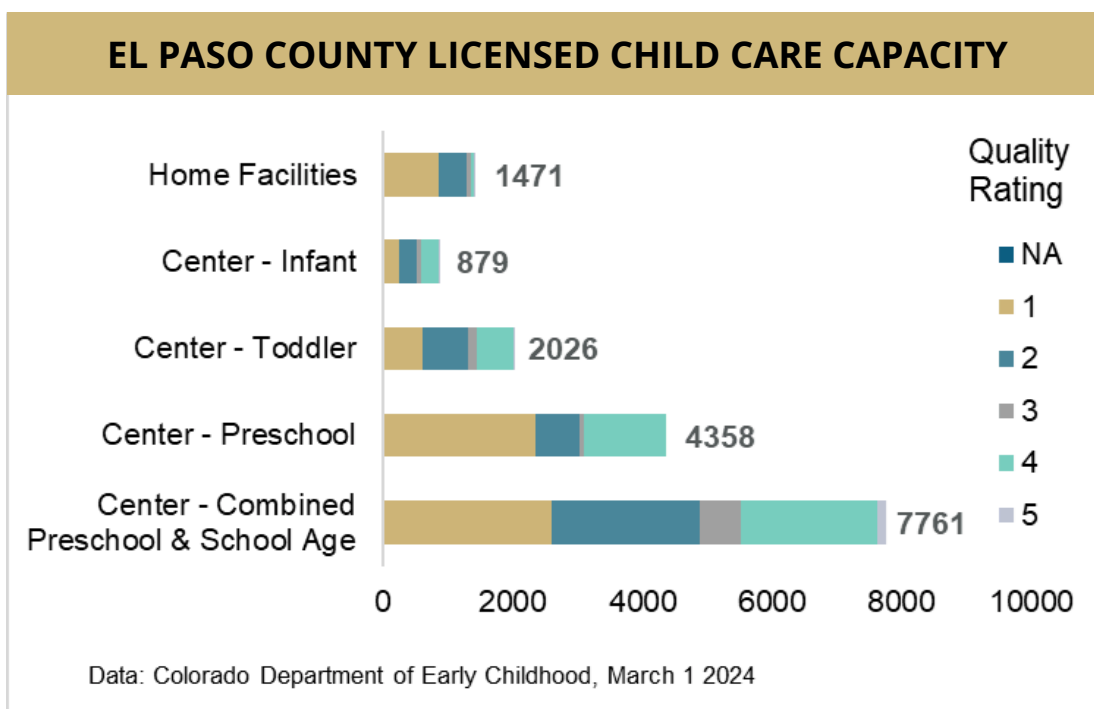
[1] As of April 2024, figures for 2024 are forecasts, not estimates.

EL PASO COUNTY CHILD POPULATION FORECASTS				
Age Group	2024 Population	Peak Year	Population at Peak	% Change, 2024 to Peak
0-3 Years	37,497	2041	43,916	17%
4 Years	9,063	2043	11,155	23%
5 Years	9,118	2044	11,231	23%
Data: Colorado State Demography Office				



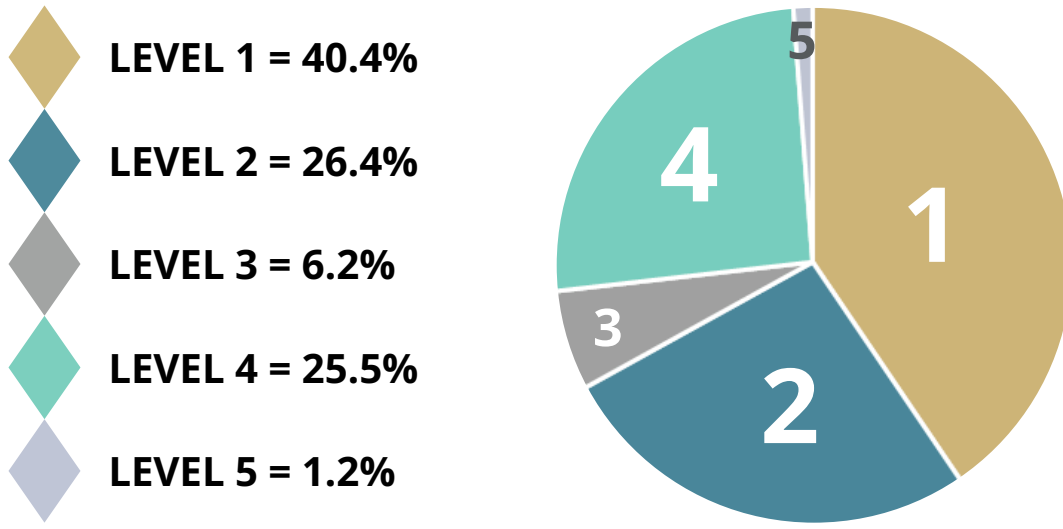
**2.8**  
**CHILDREN**  
**FOR EVERY**  
**LICENSED**  
**CHILD CARE**  
**SLOT**

Colorado early care and learning programs are licensed by the Colorado Department of Early Childhood (CDEC). **At 16,441, the total capacity of licensed childcare in El Paso County is considerably short of the 2024 population of 0-4-year-olds of 46,560.** That is, there are 2.8 children for every slot. Furthermore, this is likely an underestimate to the extent that those slots may be used by school-age children; the capacity is 8,680 excluding the combined preschool and school-age category [2].



[2] Capacity of facilities for school-age children only and resident camp facilities are not included.

## EL PASO COUNTY LICENSED CHILD CARE SLOTS BY QUALITY RATING



Data: Colorado Department of Early Childhood, March 1, 2024

**Providers are rated on a Level 1-5 scale through CDEC's Colorado Shines system.** Providers start at Level 1 and advance to Level 2 based on the completion of required training, quality indicator program assessments, and quality improvement plans. Levels 3-5 are assigned using a points system based on (i) workforce and professional development, (ii) family partnerships, (iii) leadership, management, and administration, (iv) learning environment, and (v) child health (Colorado Department of Early Childhood, 2021).

**The largest number of slots are at quality rating Level 1 (40.4%) or 2 (26.4%).** Research has found indicators such as teachers' education levels and measures of classroom quality are associated with improved outcomes (Soliday Hong et al., 2019).



**Research has found indicators such as teachers' education levels and measures of classroom quality are associated with improved outcomes.**



## THE EARLY CHILDHOOD EDUCATION WORKFORCE

The Occupational Employment and Wage Statistics reported by the Bureau of Labor Statistics include estimates of employment and wages for four Early Childhood Education occupational categories:

(i) Education and Childcare Administrators, Preschool and Daycare, (ii) Preschool Teachers, Except Special Education, (iii) Special Education Teachers, Preschool, and (iv) Childcare Workers. We can take the sum of these categories as a measure of the Early Childhood Education workforce.

*Compared with the US overall and peer cities, the Early Childhood Education workforce in Colorado Springs is small relative to the number of children – there are 3.4 ECE workers per 100 children under five in Colorado Springs, compared with 5.2 in the United States.*

### COLORADO SPRINGS ECE WORKFORCE, 2022

	Employment	Avg. Annual Wage
<b>Preschool and Daycare Administrators</b>	110	\$57,280
<b>Preschool Teachers (ex. Special Ed.)</b>	590	\$36,810
<b>Special Ed. Teachers, Preschool</b>	130	\$53,770
<b>Childcare Workers</b>	730	\$32,440

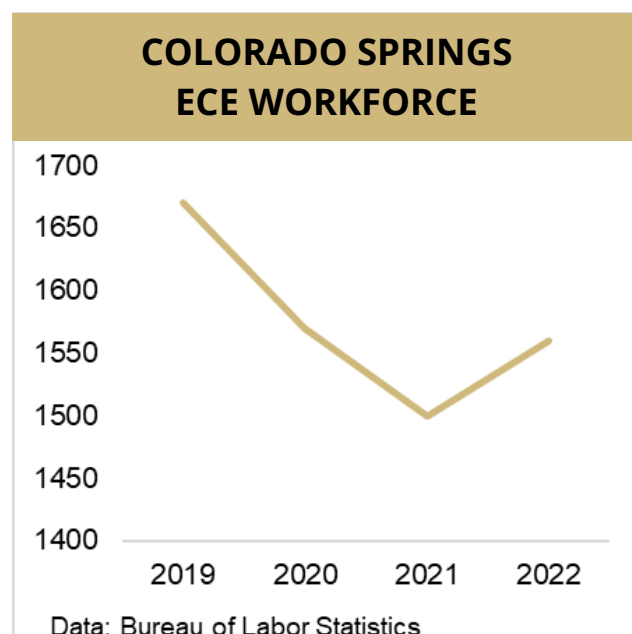
Data: Bureau of Labor Statistics



**1,460**  
IN ECE  
WORKFORCE

**The ECE workforce totaled 1,460 for the Colorado Springs metro area in 2022, and all ECE occupational categories had average wages lower than the average for all occupational categories in Colorado Springs of \$61,950.**

The regional ECE workforce declined over 2019-2021 before rebounding somewhat in 2022. This decline was proportionately larger than the modest decline in the population of children under five reported by the Census Bureau, resulting in a decrease in the number of ECE workers per 100 children from 3.54 in 2019 to 3.21 in 2021, recovering to 3.42 in 2022 [3].



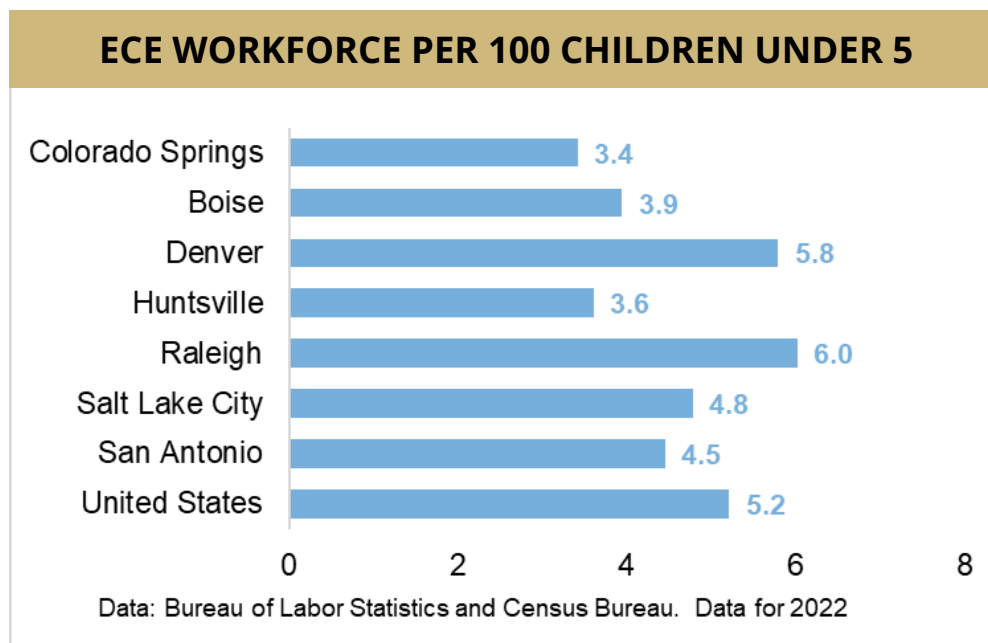
[3] Using different underlying data, [CDEC's Early Care and Education Workforce Data Dashboard](#) reports 2,508 ECE professionals in El Paso County in 2021. The BLS data used here allows for consistent comparisons across time and regions.



## Colorado Springs has 3.4 ECE workers per 100 children under five.

Data on the ECE workforce relative to the number of children provide a proxy for ECE availability across different locations. Colorado Springs has 3.4 ECE workers per 100 children under five, which is fewer than all the comparison cities [4] and is substantially lower than the national figure of 5.2.

Among the metro areas considered, the ones with the highest number of ECE workers per child, Denver and Raleigh, are also the ones with the highest maternal labor force participation and median household incomes.



[4] The figures for Boise, San Antonio and Huntsville may be slightly underestimated because of missing data: the number of preschool special education teachers was not reported for these cities and preschool and daycare administrators were also not reported for Boise.

# EARLY CHILDHOOD EDUCATION COSTS

Costs of early childhood education can be a severe burden on families. Data on costs from the 2022 Colorado Child Care Market Rate Study (Brodsky, 2022) [5] combined with median incomes for different types of households with children show that **the median cost of childcare ranges from 9% to 50% of median household income depending on the type of childcare and household.**

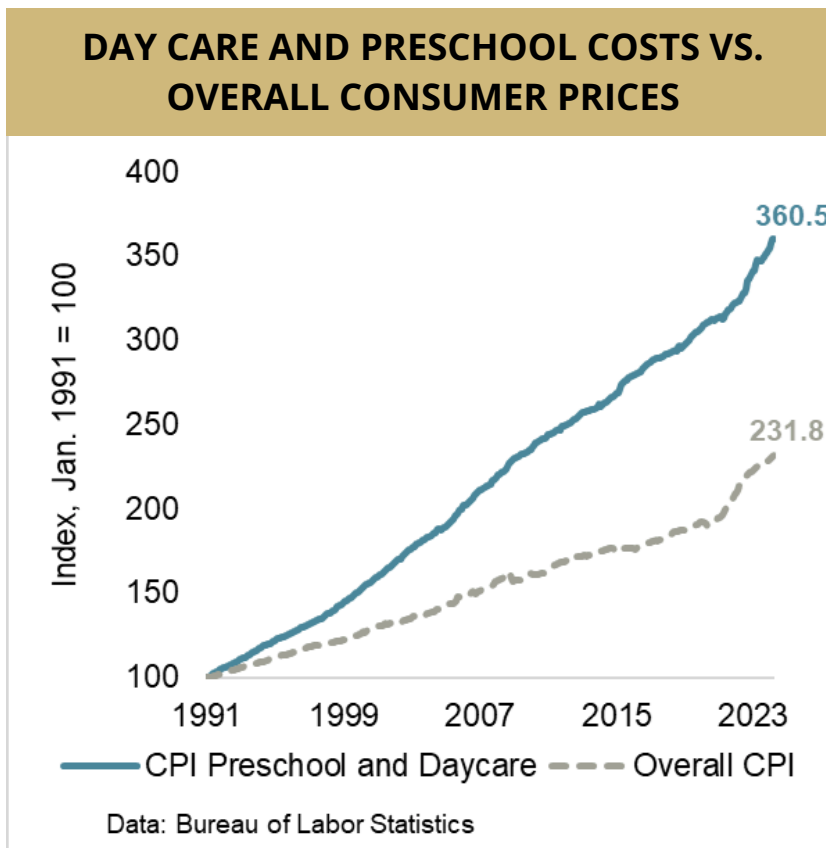
*The cost of full-time childcare in El Paso County ranges from 9% to 50% of median income depending on family and childcare type. Childcare costs have been increasing at a rate more than 50% higher than overall inflation.*

EL PASO COUNTY MEDIAN ANNUAL CHILDCARE COSTS						
		Center-Based			Home-Based	
		0-18 mos.	18-36 mos.	36-72 mos.	0-24 mos.	24-72 mos.
Annual Cost		\$18,223	\$15,626	\$13,835	\$12,568	\$11,151
Income Share	Married Couple	16%	13%	12%	11%	9%
	Single Father	29%	25%	22%	20%	18%
	Single Mother	50%	43%	38%	34%	30%
Data: 2022 Colorado Child Care Market Rate Study, Census Bureau. Data for 2022.						

[5] Median daily costs are annualized by multiplying by 260.

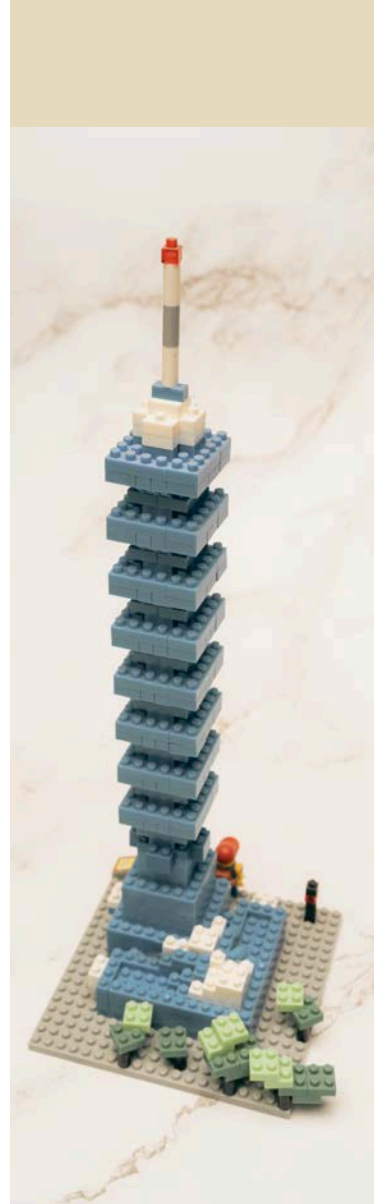


**Today's high cost of early childhood education reflects a long-term trend.** Economists attribute much of this to the “cost disease” of personal services, sometimes referred to as “Baumol’s disease,” after the economist William Baumol. According to this hypothesis, the cost of services that are delivered in person with relatively little scope for technological progress rises relative to other goods and services as economy-wide technological progress leads to higher real wages.



This is evident in US Consumer Price Index data. Since January 1991, the overall price level has increased 2.3-fold, but the index for preschool and daycare has increased 3.6 times.

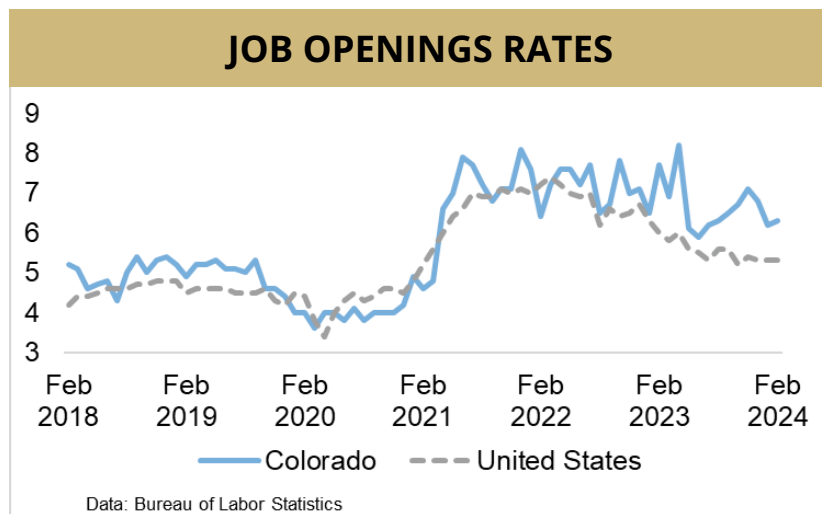
**The average annual rate of overall consumer price inflation has been 2.5%, while inflation for preschool and daycare has averaged 3.9% per year.**





## IMPACTS: LABOR SUPPLY

**Labor supply is a significant concern for the regional economy.** Although the labor market has cooled somewhat, Colorado's job openings rate [6] remains notably higher than the US overall and is higher than its pre-pandemic level.



At the metro level, over the past five years, the unemployment rate for Colorado Springs has been 0.5 percentage points lower than the US overall on average [7]. At 86.7%, the labor force participation rate for persons aged 25-54 in Colorado Springs is 1.2 percentage points below the US as a whole [8]. Demographic projections indicate population aging will create more pressure on the labor force.

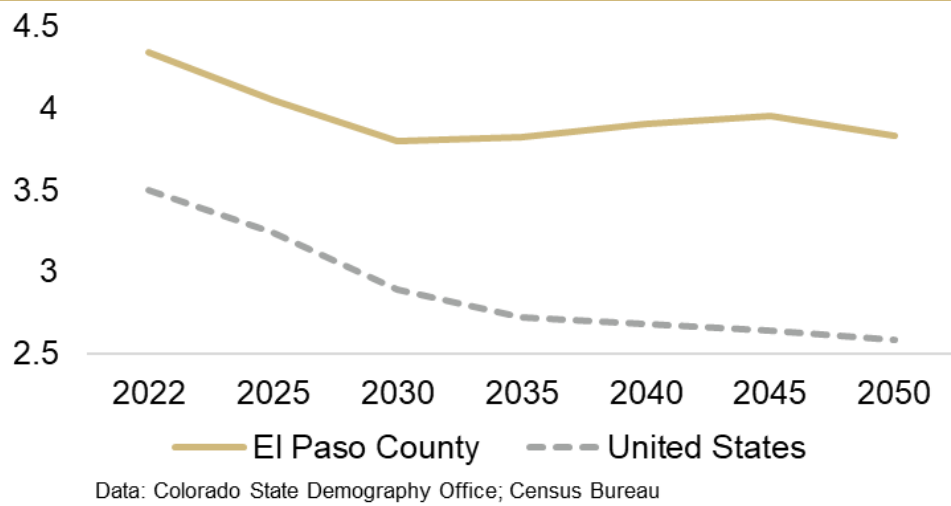
*Increased availability of early childhood education can help address the region's tight labor supply conditions. ECE programs have been shown to increase labor force participation by mothers. Labor force participation among women with young children is 11.5 percentage points lower in Colorado Springs than nationwide. An increase of 10 percentage points would generate approximately \$96 million in additional income and raise local GDP by \$223 million.*

[6] The job openings rate is the number of job openings as a percentage of employment plus openings.

[7] Data: Bureau of Labor Statistics

[8] Data: Census Bureau. Data for 2022. Includes armed forces.

## WORKING AGE (18-64) TO 65+ POPULATION RATIO



Although El Paso County's demographics are more favorable than the US overall, the ratio of the population aged 18-64 to over 65 is forecast to decrease significantly in the near future, from 4.4 in 2022 to 3.8 in 2030.

### **Childcare difficulties can be significantly disruptive to employment relationships.**

In Colorado, families of 11.8% of children aged 0-5 reported not taking a job, quitting a job or greatly changing jobs due to childcare problems [9]. One study of five employer cases (Kos et al., 2024) found significantly positive returns on investment to firms providing childcare benefits due to improved employee retention and reduced absences. A survey by the Society for Human Resource Management found the share of companies offering backup childcare has increased from 26% in 2019 to 32% in 2023 (Torry and Fong, 2024).



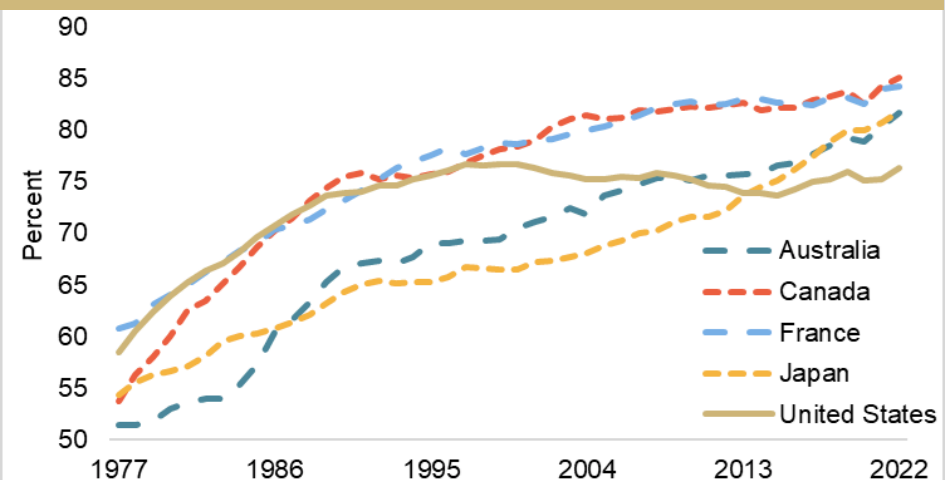
**In Colorado, families of 11.8% of children aged 0-5 reported not taking a job, quitting a job or greatly changing jobs due to childcare problems.**

[9] Data: 2022 National Survey of Children's Health.



Much of the evidence on ECE and labor force participation is from international studies. **Women's [10] labor force participation in the United States has been in relative decline.** In 1985, among 20 OECD countries [11], the labor force participation rate of US women aged 25-54 was 5th highest, exceeded by only the Nordic countries; in 2022, the US was 18th. Although the rate increased for the United States, from 69.6% to 76.4% during this period, many peer countries saw much larger increases. For the US, women's labor force participation peaked in 1999 at 76.8% and has fallen slightly since, while continuing to increase in many other countries.

### LABOR FORCE PARTICIPATION RATE, WOMEN 25-54



Data: OECD Labor Force Statistics

[10] Studies generally focus on women who have historically devoted more time to family responsibilities. According to the American Time Use Survey, among parents with children in the household under age 6 in 2022, 88.4% of women participate in caring for and helping household children versus 68.0% for men. Women spent an average of 2.59 hours per day caring for and helping household children, versus 1.47 hours for men.

[11] The OECD is an organization of mainly high-income countries. The ranking includes the 20 countries that were OECD members in 1985 for which data is available in both years. Data: OECD Labor Force Statistics.

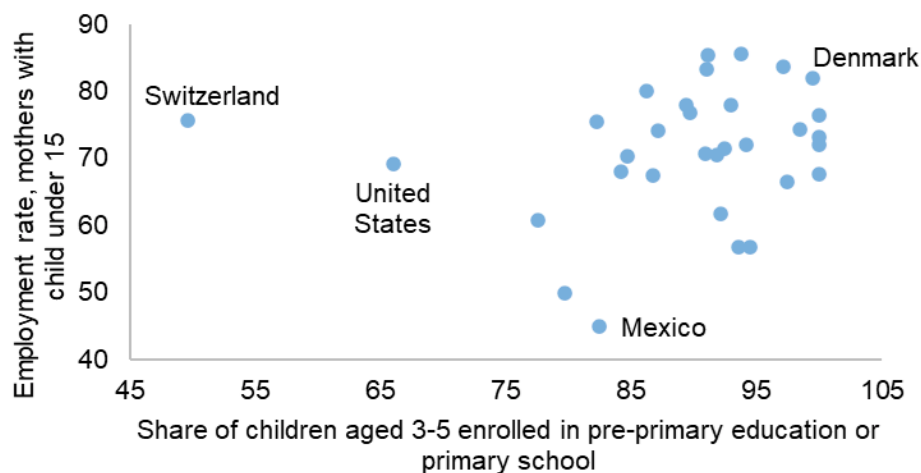
Differences in family policies as well as changes in the earnings structure have been studied as explanations for these international disparities [12]. Among the family policies that have been examined is support for early childhood education.

Olivetti and Petrongolo's cross-country regression analysis (2017) finds that higher early childhood education and care spending is associated with significantly higher female employment rates and lower male-female employment and earnings gaps.



Among 32 countries for which data is reported for 2018 in the OECD Family Database, the United States is significantly below average in the **share of 3-5-year-olds enrolled in pre-primary education or primary school (66.0% for the US** versus an average of 89.3%) and also modestly below average in the employment rate of mothers with children under 15 (69.1% versus 71.2%).

### MOTHERS' EMPLOYMENT + CHILD ENROLLMENT



Data: OECD Family Database. Data for 2018.

...higher early childhood education and care spending is associated with significantly higher female employment rates and lower male-female employment and earnings gaps.

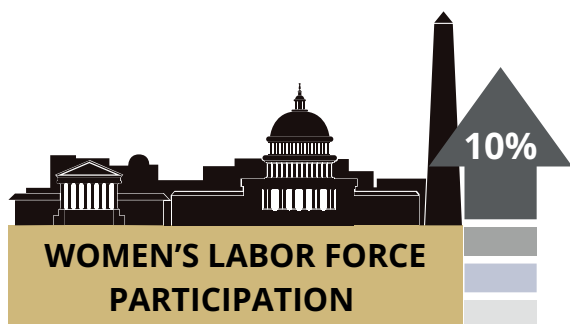
[12] For a recent overview, see Albanesi (2023).



**A number of studies have examined the impact of policies that significantly increase the availability of early childhood education.** Two examples in North America are found in Québec and Washington, DC.



The Québec Early Childhood Education and Care program provided low-cost, year-round ECE for children aged 0-5. The phase-in of the program began in 1997, with the fee initially set at \$5 per day. For the most recent year they studied, 2008-09, Haeck et al. (2005) found that the **policy raised mothers' labor force participation by 12 percentage points and led to more than six additional weeks of work.** The effects were stronger for more highly-educated mothers.

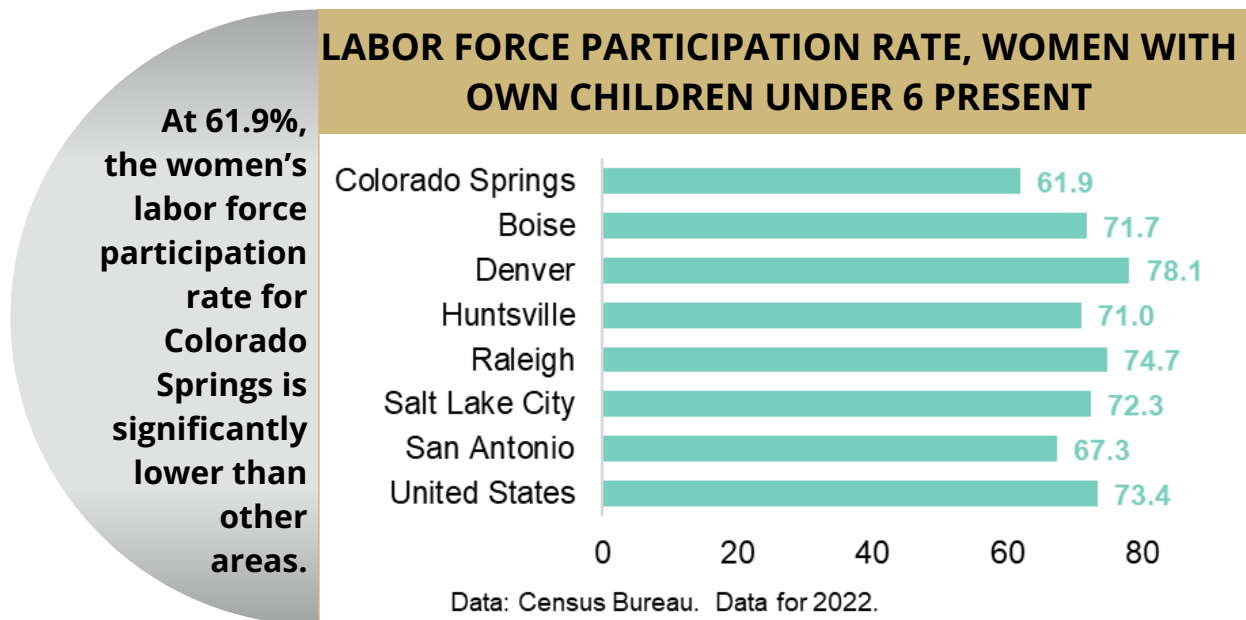


A universal preschool program beginning in 2009 in Washington, D.C., was available for all children during the school year. It enrolled about 90% of four-year-olds and 70% of three-year-olds and was found to increase maternal labor force participation by 10 percentage points (Malik, 2018). **The largest increases in participation were in both low-income and very high-income households, with no increase in the middle of the income distribution.** Among married mothers, full-time work increased, while part-time work decreased, while the opposite was true for unmarried mothers.



**Policies that would improve the labor force participation rate of women and mothers would be particularly meaningful in the Pikes Peak Region.**

At 61.9%, the labor force participation rate – including those in the armed forces – of women with their own children under age six in the household is significantly lower than for the United States overall, at 73.4%, or any of the comparison cities.



**With 19,616 women with children under six in the region [13], a policy that raised this rate by 10 percentage points would bring 1962 people into the labor force.** Assuming a 4% unemployment rate and that the additional workers would earn similarly to working mothers [14], regional incomes would increase by approximately \$96 million annually. According to the Bureau of Economic Analysis, El Paso County's GDP in 2022 was \$46.6 billion, or \$118,500 per employed person.



Assuming the additional workers would be similarly productive as current workers, **this increase in labor force participation would generate \$223 million in additional county GDP per year.**

[13] Census Bureau estimate for 2022.

[14] In 2022, median weekly earnings of women with own children under 6 in the home were \$984 (Bureau of Labor Statistics, "Highlights of Women's Earnings in 2022," Table 7.)



**Median earnings in Colorado Springs for families with children of the householder under 18 present are 4.7% lower than for families without children present.**

**Low maternal labor force participation has an impact on family incomes.**

Median earnings in Colorado Springs for families with children of the householder under 18 present are 4.7% lower than for families without children present. This family earnings gap is more than double that of the United States as a whole. Of the comparison cities considered, four have higher earnings for families with children and only one, San Antonio, has a larger negative gap.

**MEDIAN FAMILY INCOME FOR FAMILIES WITH AND WITHOUT CHILDREN PRESENT**

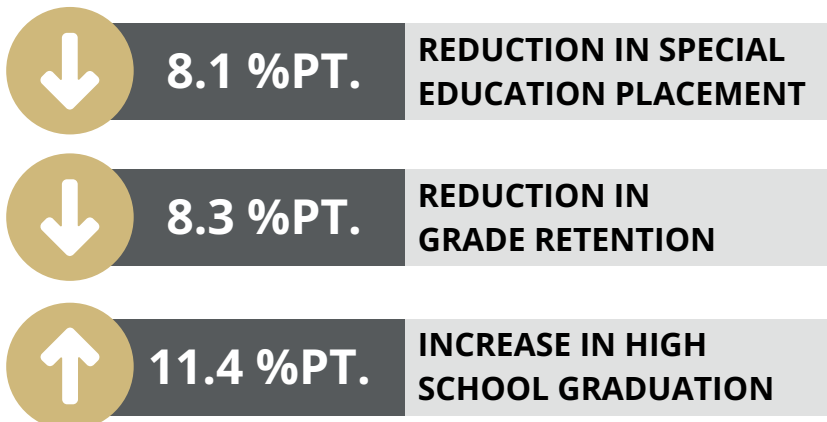
	No Own Children Present	Own Children Under 18 Present	Gap (%)
<b>Colorado Springs</b>	\$99,485	\$94,826	-4.7
<b>Boise</b>	\$89,702	\$94,272	5.1
<b>Denver</b>	\$121,928	\$124,291	1.9
<b>Huntsville</b>	\$106,466	\$108,281	1.7
<b>Raleigh</b>	\$109,665	\$122,406	11.6
<b>Salt Lake City</b>	\$110,035	\$106,847	-2.9
<b>San Antonio</b>	\$89,371	\$77,041	-13.8
<b>United States</b>	\$92,816	\$91,057	-1.9

Data: Census Bureau. Data for 2022.

## IMPACTS: PRE-KINDERGARTEN OUTCOMES

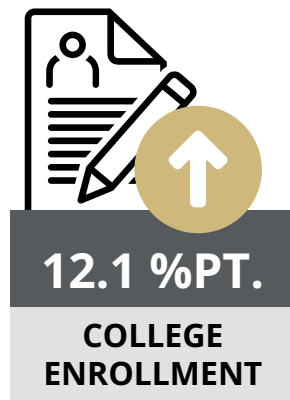
Many studies have documented the effects of Pre-Kindergarten programs on a variety of outcomes, including school readiness, school attendance and grade retention, test scores, high school graduation, and college enrollment. A useful overview is given by Phillips et al. (2017).

A first generation of academic research focused heavily on early demonstration programs – the Perry Preschool Project in Ypsilanti, Michigan in the 1960s, the Abecedarian Project in North Carolina in the 1970s, and the Chicago Child-Parent Centers established in 1967. Longitudinal studies that followed the beneficiaries of these programs found significant effects on outcomes later in life. Wat (2007) summarized studies of these programs, which found reductions in special education placement ranging from 26-48%, reductions in grade retention from 13-44%, and increases in high school graduation from 4-44%. In a meta-analysis of 22 studies examining these programs and others, McCoy et al. (2017) found that **early childhood education was associated with an 8.1 percentage point reduction in special education placement, an 8.3 percentage point reduction in grade retention, and an 11.4 percentage point increase in high school graduation.**

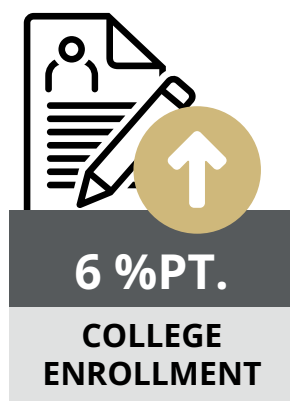


*Pre-Kindergarten has been demonstrated to improve outcomes in school and after, including high school graduation and college matriculation. Local high school graduation rates are very low – if El Paso County were a state, its graduation rate would rank 48th. Rates of college matriculation are also significantly lower for El Paso County high school graduates compared with Colorado and the United States. Higher educational attainment is associated with significantly higher earnings.*

The programs mentioned above were targeted to high-poverty children, and took place in environments where alternatives may have been limited. **The Pikes Peak Region today is a relatively affluent area with a low poverty rate [15]. More recent studies of universal programs implemented in the 21st century may be more indicative of Pre-K outcomes here.**



Oklahoma passed a law instituting universal Pre-K in the late 1990s and a series of papers have studied resulting **outcomes for students in Tulsa public schools**. Gormley et al. (2005) found significant effects on school readiness indicated by scores on a standardized cognitive test – the improvements associated with Pre-K participation were equivalent to seven to eight months of experience in letter-word recognition, six to seven months in spelling, and four months in applied problems. Looking at high school, Amadon et al. (2022) found that students who attended Pre-K were less likely to be absent or retained in grade. Gormley et al. (2023) found a **12.1 percentage point increase in college enrollment by Pre-K alumni**.



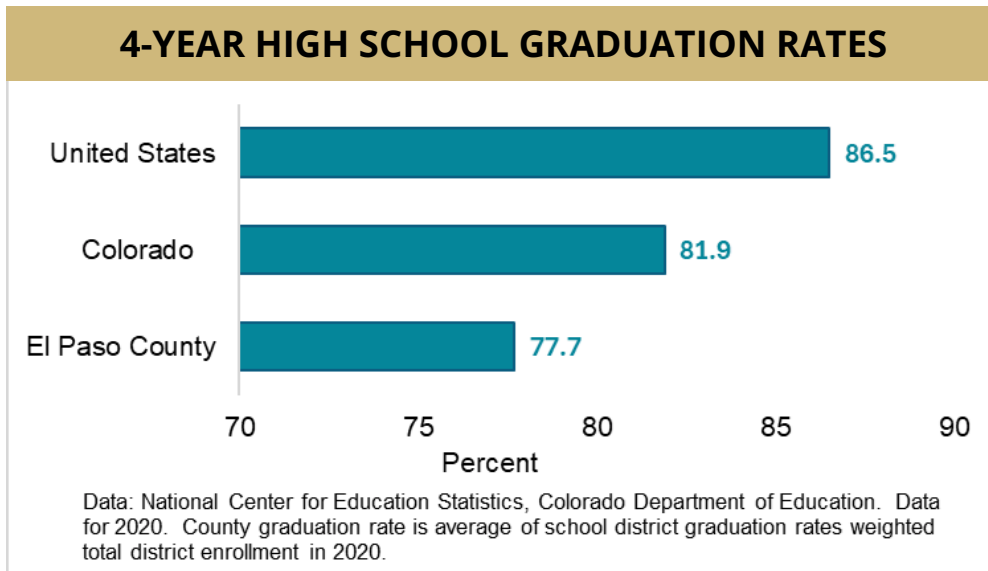
These findings are complemented by Gray-Lobe et al. (2021) who examine **results of Pre-K in Boston**. They report an **8 percentage point increase in college enrollment among Pre-K alumni**. They also found a 6 percentage point increase in the probability of high school graduation, as well as a reduced likelihood of suspensions and incarceration associated with Pre-K.

**The beneficial outcomes of pre-Kindergarten on child learning and behavior reduce costs for public schools.** Belfield and Schwartz (2006) estimate that for each child attending center-based preschool, costs to the public school system are reduced by a present value of \$3,700, which equates to \$5,732 at current prices [16]. **The main factors contributing were reduced costs for special education and for teacher compensation due to the impacts on teacher satisfaction and turnover.**

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[15] In 2022, median household income in the Colorado Springs MSA was \$81,912 and the poverty rate was 8.2%, compared with \$74,755 and 12.6%, respectively, for the United States (Source: Census Bureau).

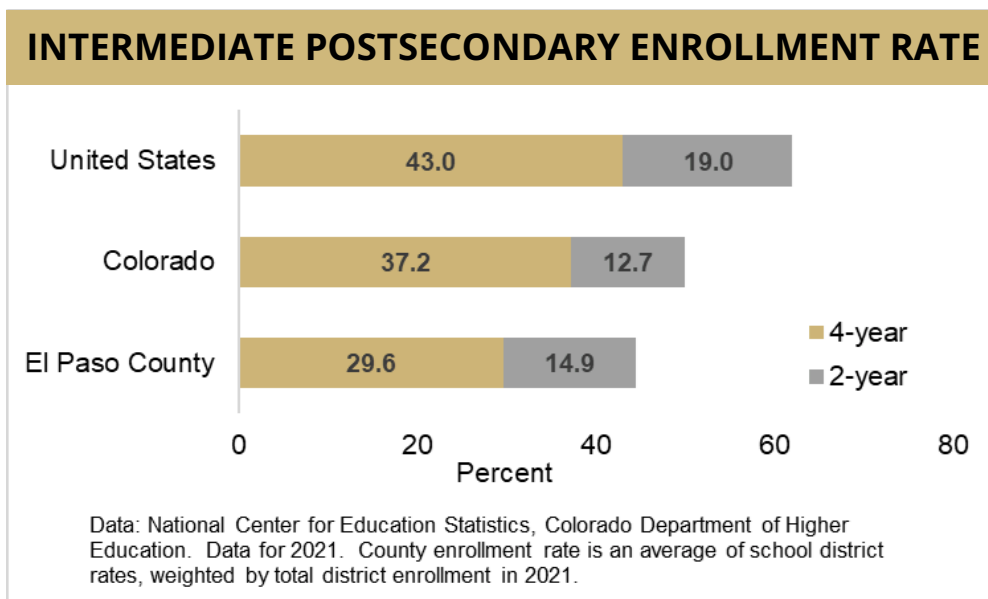
[16] Adjusted for inflation using the Consumer Price Index.



**Colorado ranks 44th among states for high school graduation rate [17],** and graduation rates in the region are still lower.

**If El Paso County was a state, its graduation rate would be ranked 48th.** An increase in the probability of graduation similar to that seen in Boston due to Pre-K would raise the local graduation rate from 77.7% to 83.7%.

Although the state and region populations have relatively high levels of educational attainment [18], rates of college matriculation in Colorado and the Pikes Peak Region also are comparatively low:



[17] National Center for Education Statistics, 2022 Digest of Education Statistics table 219.46, Public High School 4-year Adjusted Cohort Graduation Rate for 2018-19.

[18] In 2022, 42.5% of people 25 years old and older had a bachelor's degree in El Paso County, compared with 35.7% for the United States, and 45.9% for Colorado overall (Source: Census Bureau).



An increase in college matriculation similar to that observed in Tulsa would increase the local rate from 44.5% to 56.5%.

**Reducing high school dropout rates and increasing college matriculation would raise future incomes for Pre-K enrollees.**

Median Annual Earnings by Educational Attainment		
Education Level	El Paso County	United States
Less Than a High School Diploma	\$35,354	\$30,788
High School Graduate	\$37,927	\$37,290
Some College or Associate Degree	\$44,415	\$44,080
Bachelor's Degree	\$61,297	\$64,911
Data: Census Bureau. Data for 2022.		

At 6.8%, the earnings penalty suffered by those without a high school diploma compared with graduates is substantial but somewhat lower in the local labor market than nationally (17.4%). **Those with a bachelor's degree earn 61.6% more than high school graduates in El Paso County and 74.1% in the US overall.** In addition to directly benefiting the Pre-K enrollees, higher earnings are associated with greater productivity and would result in increased regional income, GDP, and tax revenue.



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## SIDEBAR: UNIVERSAL PRE-K IN COLORADO



**On April 25, 2022, Governor Polis signed HB22-1295, creating a Universal Preschool program in Colorado administered by a newly created Colorado Department of Early Childhood (CDEC).** The law followed the passage of Proposition EE in 2020, which raised taxes on cigarettes, tobacco, and nicotine products and mandated that the largest portion of the revenue be used to fund expanded preschool starting in the 2023-24 budget year.

The program makes available 15 hours per week of preschool services to all children in the school year (August-May) before they begin kindergarten, with additional hours as well as services for some 3-year-olds under certain conditions. The program has a “mixed-delivery model” – children are matched to community-based, school district-based and home-based providers. Implementation is overseen by Local Coordinating Organizations (LCOs).

It is unclear whether the benefits of a part-time program with a mixed-delivery model will have as strong of an effect on outcomes as programs that are primarily school-based that have full-time availability. Oklahoma’s universal Pre-K program is managed through school districts, requires college degrees and certification for teachers, who are paid the same as elementary school teachers, and the majority of students attend full-time (Gormley et al., 2005; Amadon et al., 2022).

Colorado’s program has replaced the Colorado Preschool Program (CPP), which was targeted at at-risk children. While the new universal Pre-K program serves a much larger number of children, some who may have received full-day preschool under CPP are no longer able to (Eason, 2024), and state-funded preschool availability for 3-year-olds has also been reduced (Mulvey, 2024).



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## VII. CONCLUSION: ECE AS ECONOMIC DEVELOPMENT

With their impacts on human capital, Arthur Rolnick and Rob Grunewald of the Federal Reserve Bank of Minneapolis argued that early childhood education investments are a promising economic development strategy, writing (see text in box):

One of the most prominent scholars of regional economic development, Timothy Bartik, compared the effects of traditional business subsidies with high-quality universal preschool. **He estimated that, at a national level, universal preschool would increase GDP and employment by 2%. At a state level, the main benefits were long-run improvements in labor supply quality and quantity.** Because these effects were mainly in the long run, initially, business subsidy programs have a higher impact, but the effects of universal preschool are greater in the longer-term (Bartik, 2006).

2%

UNIVERSAL PRESCHOOL  
WOULD INCREASE GDP AND  
EMPLOYMENT BY 2%

At a local level, economic development includes a substantial element of competition. The Pikes Peak Region has been very successful recently in attracting new employers to the region. However, the comparisons in this report identify a number of weaknesses relative to peer cities, including the availability of early childhood education, labor supply, high school graduation, and college matriculation rates. Investments that address these deficiencies would improve the competitive position of the region. In the short-run, improved access to **ECE would increase local employment and output** and would do so without requiring additional in-migration that would add to strains on local resources including housing. In the long run, it would **improve the educational outcomes of the region's children, equipping them to better take advantage of the high-skill/high-wage employment opportunities being created here.**

*Early childhood development programs are rarely portrayed as economic development initiatives, and we think that is a mistake. Such programs, if they appear at all, are at the bottom of the economic development lists for state and local governments. They should be at the top. Most of the numerous projects and initiatives that state and local governments fund in the name of creating new private businesses and new jobs result in few public benefits. In contrast, studies find that well-focused investments in early childhood development yield high public as well as private returns (Rolnick and Grunewald, 2003).*

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