HUNT INSTITUTE
FOR GLOBAL COMPETITIVENESS

THE ECONOMIC IMPACT OF PROJECT ARRIBA
ON
EL PASO COUNTY, TEXAS

MAY 2021

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Sponsorship Acknowledgments

There would not be a Project ARRIBA without the driving force of the El Paso Interreligious Sponsoring Organization (EPISO) and later Border Interfaith. EPISO recognized the regional need for such a program and set about the task of seeking funding from the State of Texas and local government for Project ARRIBA to assure the program had a fighting chance at getting started and would be sustained through the initial growth period. The entities that responded immediately were the City and County of El Paso as well as the Texas Workforce Commission. These entities remain important to Project ARRIBA today, along with other grown federal and private funding sources.

It took several years of work by EPISO to build political will and a consensus to fund Project ARRIBA. This work consisted of gatherings of concerned citizens for "house meetings" as well as approaching political appointees during accountability sessions around issues, which included living wage employment. The practice of accountability sessions is one that continues to this day. Project ARRIBA was established on the principle that a true employment and training program must, by necessity, consist of a strong partnership between business and community leaders. EPISO maintains a strong focus on community building. This includes continuously highlighting the economic realities of El Paso and a strong determination to improve career opportunities for a population living in poverty. EPISO's commitment to change these conditions results in a direct involvement and participation with Project ARRIBA along with its board of directors. There is a constant presence of EPISO's community leaders in the work being accomplished by Project ARRIBA. Another strong supporter is the Industrial Area Foundation (IAF). The IAF helped to launch Project ARRIBA and has continually supported its work in El Paso.

I. Introduction

Located at the western part of Texas, El Paso County is the largest metropolitan area along the US-Mexico border. As of 2019, the total population in El Paso is approximately 839,238 and is composed of about 83% Hispanics. According to Census data from 2019, the median age is 33 years in El Paso compared to the median age of 35 in Texas and 39 in the nation. About 70% of the population speaks a language other than English at home, this compares to 36% in Texas and 22% across the nation. As of June 2020, the region has a civilian labor force of approximately 357,100 with an unemployment rate of 9.5%. The percentage of population of whom poverty status is determined is about 19% compared to 14% and 12% in Texas and the rest of the nation, respectively. The average per capita income in El Paso County for 2019 was $21,940, only 62% of the national average. Of the population of 25 years and over only 26% have a high school diploma and only 16% have a bachelor's degree. This compares to the national average of 27% and 20%. Consequently, El Paso County ranks low in both education attainment levels and average per capita income in comparison to other major metropolitan areas and the nation.

A higher skilled workforce is associated with higher education attainment levels and therefore higher income. Given the significant disparities in educational attainment levels and individual earnings in the El Paso region, it is critical that the region builds and retains a strong skilled workforce. Project ARRIBA (Advanced Retraining & Redevelopment Initiative in Border Areas) is a workforce and economic development initiative in El Paso County whose mission is to provide training to El Pasoans who lack the necessary skillsets to access demanded occupations in El Paso. Over the life of the program, Project ARRIBA has helped over 1,400 individuals achieve careers that pay a family-sustaining living wage in El Paso. At the same time, Project ARRIBA connects these individuals to the region's labor market where workforce is most demanded.

According to the National Center for Education Statistics (NCES) 2018 study, the share of children enrolled in post-secondary education whose parents did not attend college has shrunk in recent decades. However, the proportion of those students enrolled or that have graduated from higher education is still proportionally fewer in comparison to those students whose parents at least attended or graduated college.

This report consists of this introduction and three additional sections. Section II provides an overview of Project ARRIBA. Section III explains the methodology and assumptions used to conduct the economic impact analysis. Section IV presents the result estimates of the economic impact of Project ARRIBA on El Paso County. Section VI gives the closing thoughts of the report.

II. Overview of Project ARRIBA Program

Project ARRIBA was incorporated on December 1998 as a public not-for-profit community-based organization. Project ARRIBA maintains a unique partnership between private corporate partners, community-based organizations, and training institutions that makes the organization an exclusive job training program within the region. The program is a multi-purpose initiative that provides for socially and economically disadvantaged individuals who want to pursue a better career path while also addressing the needs of workforce shortages in El Paso (Project ARRIBA, 2020).

Project ARRIBA provides participants with the financial, educational, and social assistance needed to complete a degree in the demanded occupation. Once a participant graduates from the program, they are placed in a job position in the El Paso area. Project ARRIBA sponsors careers in highly demanded occupations, most commonly, within the healthcare and information technology industries. The careers sponsored pay a family-sustaining living wage with and career advancement opportunities. As An interested participant that is eligible for the program must have the following basic characteristics::

- U.S. Citizen or Legal Resident and lives in the El Paso County;
- Household income is as or below 200% of the HHS Poverty Guidelines;
- Is 18 years of age or older;
- Has a High School Diploma or G.E.D.;
- Is eligible to work in the U.S.
- Demonstrates a barrier to full time employment e.g. lack of skills, limited English proficiency, lack of transportation and/or lack of child care.

In addition to the basic characteristics, Project ARRIBA also recruits a participant that:

- Is a Veteran or dependent family member of a Veteran or active military
- Lives in the Rural County of El Paso
- Is able to make a commitment to long-term education (12 to 36 months)
- Is able to make a commitment to long-term employment in El Paso
- Is willing to commit to the completion of the program
- Wants economic success and security for themselves and family's future

For the year 2019, pre-Project ARRIBA participants had the following demographic characteristics:

- Average age of 31 years
- Average annual pre-Project ARRIBA participant wage of $4,392
- Average annual post-training wage of $50,520

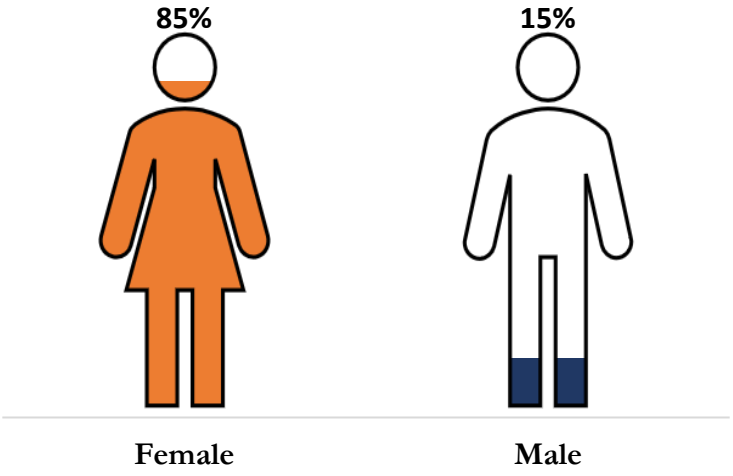
Table 1 gives the percent of gender type of sponsored participants by year from 2015-2019. As shown in the table, women make up the highest portion of the Project ARRIBA program. Although the percentage of male participants in the program is considerably smaller in comparison, the percentage of males has increased since 2015. Figure 1 provides the same information in a different display by providing an average from 2015-2019.

Table 1. Percent of Gender Type for Sponsored Participants by Gender, 2015-2019

	2015	2016	2017	2018	2019
Female	91%	84%	83%	84%	84%
Male	9%	16%	17%	16%	16%

Source: *Project ARRIBA.*

Figure 1. Average of Sponsored Participants by Gender from 2015-2019



Source: *Project ARRIBA.*

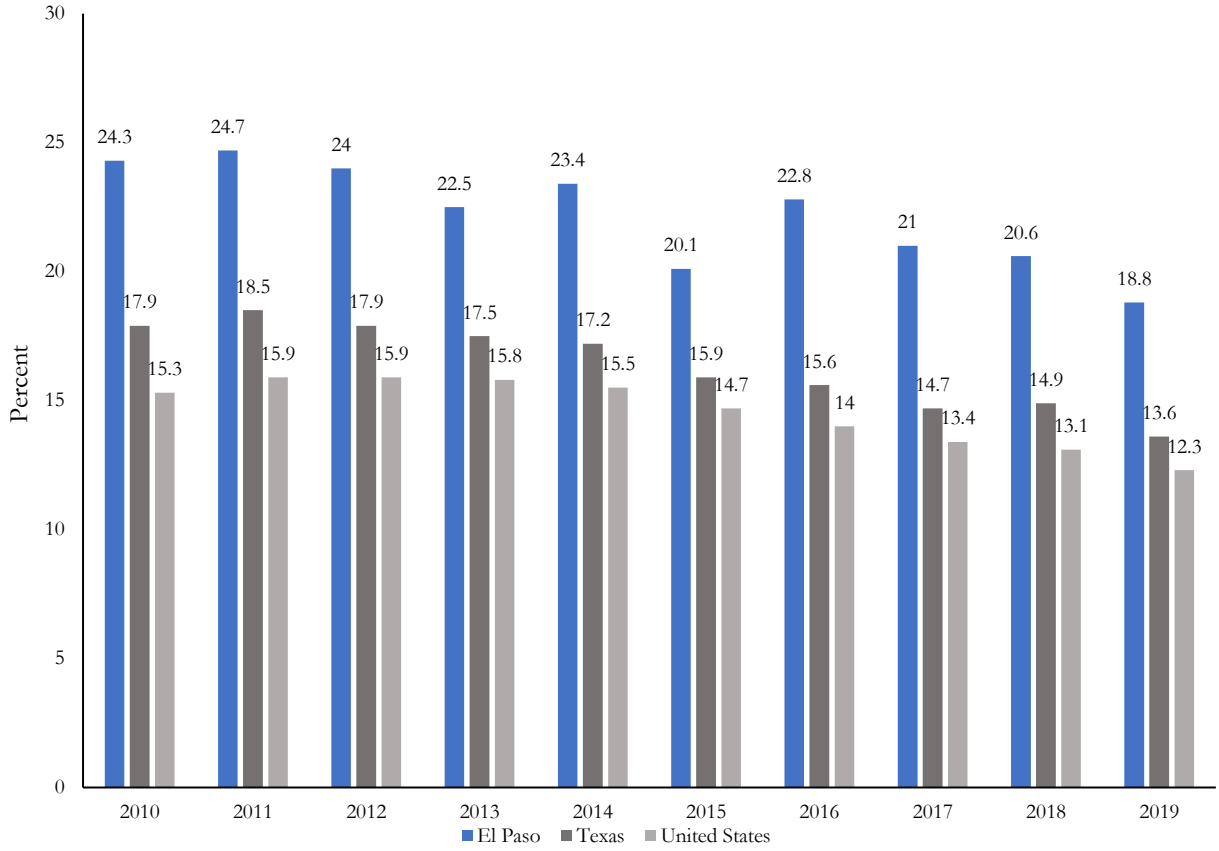
Table 2 provides information on the number of graduates, average earnings of a graduate, and the total expenditures by year from 2015-2019. In 2019, a total of 80 participants graduated from the program and the average annual earnings for this individual was $50,520 post-Project ARRIBA. This compares to the average annual wage of a pre-Project ARRIBA individual of $4,392. The total investment amount was $1.519 million. The information in Table 2 is provided by Project ARRIBA and is used to evaluate the overall economic impact of the program in the remainder of this report.

Table 2. Project ARRIBA Graduates, Average Earnings, and Total Expenditures, 2015-2019

Year	Number of Graduates	Average Annual Earnings	Total Expenditures, (Million USD)
2015	74	$45,785	$1.315
2016	77	$48,075	$1.324
2017	92	$48,839	$1.313
2018	90	$48,474	$1.369
2019	80	$50,520	$1.519

Source: *Project ARRIBA.*

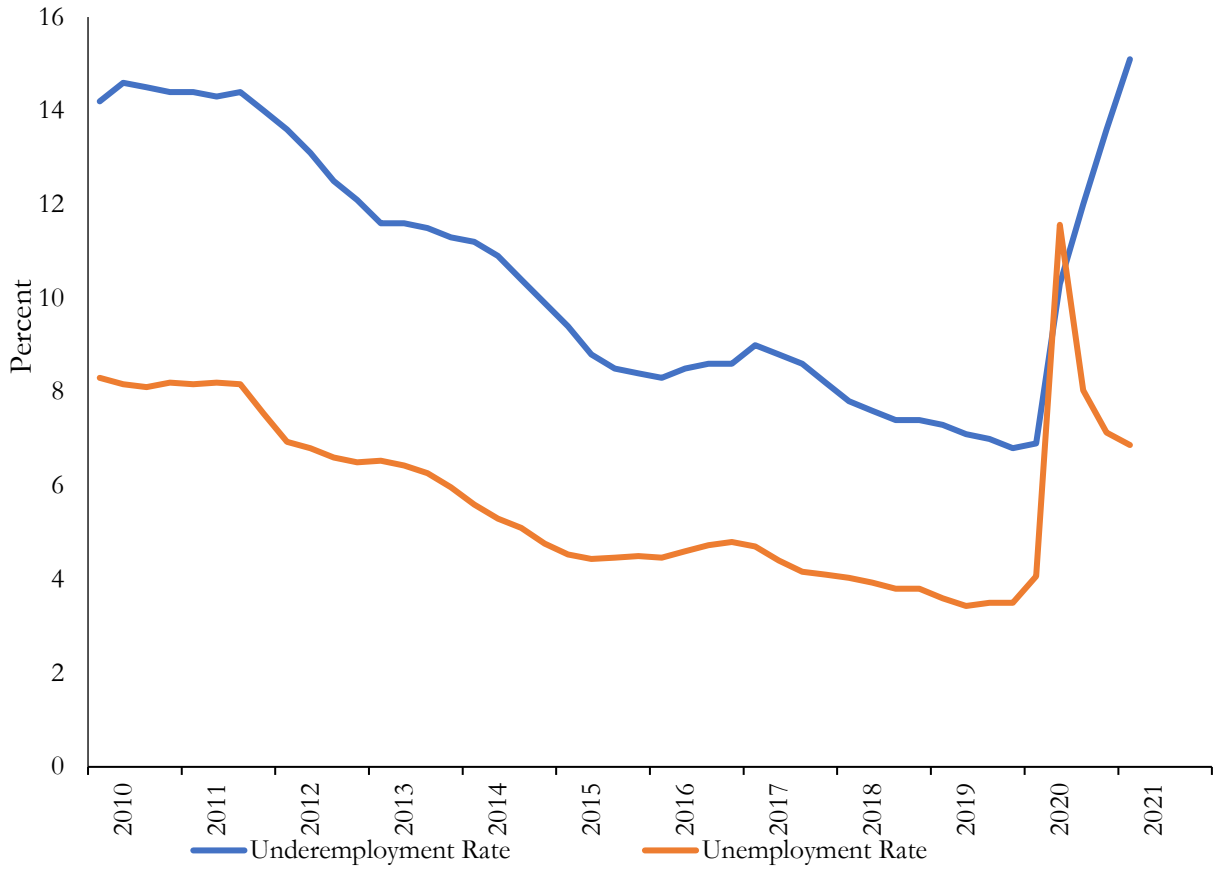
Graph 1. Population Below the Poverty Line in El Paso County, State of Texas, and United States



Source: *United States Census Bureau, ACS 1-year Estimates.*

Graph 1 shows the poverty rate for El Paso County, the State of Texas, and the United States from the years of 2010-2019. The poverty level is determined by an earnings threshold per household, depending on the number of people living in a household and how many of them are below the age of 18. For example, the earnings threshold in 2019 for an individual below the age of 65 was an annual income of $13,465 across the entire country. The poverty rate in El Paso County is significantly higher compared to the State of Texas and the United States and has followed a similar trend since 2010.

Graph 2. Unemployment and Underemployment Rates in the State of Texas from 2010-2021



Source: *U.S Bureau of Labor Statistics.*

Graph 2 shows the unemployment and the underemployment rates for the State of Texas. The unemployment rate measures the percentage of labor force that is unemployed 15 weeks or longer. The underemployment is the unemployment rate plus workers that transitioned to part-time due to economic reasons but would want to work full-time. Graph 2 also shows that the unemployment rate has started to decrease very recently, while the underemployment rate continues to increase. Meaning, the number of part-time workers that wish to work full-time is increasing at a higher rate than fully unemployed workers. The Bureau of Labor Statistics only releases these statistics at the state level and for the country.

III. Methodology

The following section provides an overview of the two different methodologies that are employed for assessing the economic impact of Project ARRIBA on El Paso County in year 2019. This section consists of two parts. The first part estimates the economic impact of Project ARRIBA's activity in El Paso County using the Economic Impact for Planning software (IMPLAN). IMPLAN estimates the total direct, indirect, and induced effects attributed to the program. The Hunt Institute will estimate the economic impact in terms of output (business sales), employment, and labor income.

The second part of the project calculates the net present value of increased stock of human capital of the Project participants to evaluate the economic and tax impact of Project ARRIBA participants. This section also consists of calculating the unit cost per Project ARRIBA participant and the cumulative increase in human capital stock. Additionally, a benefit-cost ratio of Project ARRIBA is also calculated. A further detailed explanation of both methodologies is below:

1. Input-Output Analysis

Input-Output Analysis (IOA) is the primary methodology the Hunt Institute applied to estimate the economic impact of the Project ARRIBA program on the El Paso local economy. The IOA technique is commonly used to estimate economic impacts of an economic activity in a regional economy. IOA can be used to measure the overall impact that a particular project has on a regional economy by assuming that the sector's reaction to an underlying change is equal to the entire sector's output (Chmura Economics & Analytics 2009). The following simplified assumptions are required to conduct an IOA:

1. Constant Returns to Scale: An increase in the number of inputs will result in a proportional increase in the number of outputs. Likewise, a decrease in inputs will result in a proportional decrease in outputs.
2. No Supply Constraints: The model assumes there are no limitations regarding production amounts for a product. There are also no limits to resources and employment.
3. Fixed Input Structure: Changes in the economy will have an impact on the product produced, however, they will not impact the products or services that are used for producing the product.
4. Static Model: The model assumes a steady state. In other words, factors in the model do not change over time.

The Hunt Institute applied the IOA software Economic Impact Analysis for Planning (IMPLAN) to estimate the economic impact of Project ARRIBA's activity in El Paso County. The economic impact variables that IMPLAN estimates are output, value-added, labor income, and employment.

Total economic impact estimates using IMPLAN consists of the sum of the following effects:

- Direct effect: Initial spending for PA program.
- Indirect effect: Secondary economic activity generated by purchases made by PA employees.
- Induced effect: Economic activity generated by household income as a result of direct and indirect impacts, for example, workers for whom jobs are created have new income to spend on consumer goods and services.

Input-output analysis allows estimating multiplier ratios. These ratios are useful in predicting how a change in one sector will affect a regional economy. A multiplier describes how a given change in a particular industry will result in a change in the overall economy. The multiplier ratio results for employment and output for each region are elaborated upon in further detail later in the report.

2. Increase of Stock of Human Capital

Increase of stock of human capital consists of assessing the lifetime earnings of Project ARRIBA's participants. The so-called stock of human capital increases for an individual as they progress their education and training levels during their lifetime. Therefore, an individual's earning capacity is expected to increase over their remaining work-life years. The Hunt Institute calculates the potential earnings of Project ARRIBA graduates during their work-life years and compares it to their potential life earnings as non-Project ARRIBA participants. Then, the net present value of the difference in work-life earnings between the Project ARRIBA participants and non-Project ARRIBA graduates is calculated. The difference represents the present value of the incremental or marginal change in the stock of human capital resulting from graduating from Project ARRIBA's program.

The stock of human capital investment framework analysis is a concept that has been studied before by Becker (1994). Becker studies how investment in an individual's education and training is similar to investment in equipment for a business. The importance of improving the education and skill of American workers is emphasized. Becker's theoretical analysis expands to understanding human capital income inequality and economic growth.

To calculate the lifetime earnings of a Project ARRIBA graduate and a non-Project ARRIBA individual, and therefore the increase in stock of human capital, several assumptions were required. The following assumptions are also similar for previous year's calculations and they are consistent with the information provided by Project ARRIBA:

- For 2019, the average age of a Project ARRIBA graduate is 31. For comparison reasons, it is assumed that the average age of a non-Project ARRIBA participant is also 31.
- The work-life years is to 62 years of age for both individuals.
- The average annual growth in compensation is 3% for a Project ARRIBA graduate.

- The average annual growth in compensation is 5% for a non-Project ARRIBA individual.
- For a non-Project ARRIBA individual, average annual earnings adjust to $34,880 (2019 USD) at age 40.

Lastly, a return on investment analysis, or a benefit-cost analysis, of Project ARRIBA is calculated by comparing the cumulative life-time earnings of Project ARRIBA graduates to Project ARRIBA's operating cost.

IV. Results

The following section of this report presents the results of the economic impact analysis of Project ARRIBA on El Paso. This section also discusses expansion opportunities for Project ARRIBA along with possible capacity constraints.

1. Economic Impact of Project ARRIBA

Table 5 is a summary of the economic impact of Project ARRIBA activities in the El Paso region. In 2019, Project ARRIBA activities supported a total of 18 jobs in the region. The total economic output was about $2.385 million, the added annual household income was about $0.876 million, and the value added was about $1.106 million.

Table 3. Economic Impact of Project ARRIBA Activities, 2019

Impact Type	Direct	Indirect	Induced	Total
Employment	11	3	4	18
Output	$1.519	$0.352	$.513	$2.385
Labor Income	$0.623	$0.104	$0.149	$0.876
Value Added	$0.653	$0.180	$0.273	$1.106

Source: *The Hunt Institute using IMPLAN.*
Note: *Estimates are reported in 2019 dollars.*

2. Increase in Stock of Human Capital

Table 6 summarizes the incremental change in income for Project ARRIBA participants and a benefit-cost ratio analysis is given for year 2019. The net increase in income of Project ARRIBA graduates was $23.54 million, or $0.294 million per participant. This means that, in 2019, Project ARRIBA added $23.54 million in value to the El Paso economy. The benefit-cost ratio implies $15.50 in benefits for every $1.00 invested.

Table 4. Summary of Increase in Stock of Human Capital Results for 2019

Project ARRIBA, 2019 Dollars	
Net Increase in Income (Million)	$23.54
Increase in value of future income per participant (Million)	$0.294
PA Investment in 2019 (Million)	$1.519
Benefit/Cost Ratio	15.50

Source: *The Hunt Institute.*

Figure 2. Return on Investments of Project ARRIBA, 2019

15x

Source: *The Hunt Institute.*

Table 7 summarizes the incremental change in income for Project ARRIBA participants and a benefit-cost ratio analysis is given for year 2018. Estimates are given in 2018 USD. The total investment was $1.369 million. The net increase in income of Project ARRIBA graduates was $25.65 million, or $0.285 million per participant. For 2018, Project ARRIBA added $25.65 million in value to the El Paso economy. The benefit-cost ratio implies $18.73 in benefits for every $1.00 invested.

Table 5. Summary of Increase in Stock of Human Capital Results for 2018

Project ARRIBA, 2018 Dollars	
Net Increase in Income (Million)	$25.65
Increase in value of future income per participant (Million)	$0.285
PA Investment in 2018 (Million)	$1.369
Benefit/Cost Ratio	18.73

Source: *The Hunt Institute.*

Figure 3. Return on Investments of Project ARRIBA, 2018

18x

Source: *The Hunt Institute.*

Table 8 summarizes the incremental change in income for Project ARRIBA participants and a benefit-cost ratio analysis for year 2017. Estimates are given in 2017 USD. The total investment was $1.313 million. The net increase in income of Project ARRIBA graduates was $28.08 million, or $0.305 million per participant. For 2017, Project ARRIBA added $28.08 million in value to the El Paso economy. The benefit-cost ratio implies $21.39 in benefits for every $1.00 invested.

Table 6. Summary of Increase in Stock of Human Capital Results for 2017

Project ARRIBA, 2017 Dollars	
Net Increase in Income (Million)	$28.08
Increase in value of future income per participant (Millions)	$0.305
PA Investment in 2017 (Million)	$1.313
Benefit/Cost Ratio	21.39

Source: *The Hunt Institute.*

Figure 4. Return on Investments of Project ARRIBA, 2017

21x

Source: *The Hunt Institute.*

Table 9 summarizes the incremental change in income for Project ARRIBA participants and a benefit-cost ratio analysis for year 2016. Estimates are given in 2016 USD. The total investment was $1.324 million. The net increase in income of Project ARRIBA graduates was $23.99 million, or $0.312 million per participant. For 2016, Project ARRIBA added $23.99 million in value to the El Paso economy. The benefit-cost ratio implies $18.12 in benefits for every $1.00 invested.

Table 7. Summary of Increase in Stock of Human Capital Results for 2016

Project ARRIBA, 2016 Dollars	
Net Increase in Income (Million)	$23.99
Increase in value of future income per participant (Million)	$0.312
PA Investment in 2016 (Million)	$1.324
Benefit/Cost Ratio	18.12

Source: *The Hunt Institute.*

Figure 5. Return on Investments of Project ARRIBA, 2016

18x

Source: *The Hunt Institute.*

Table 10 summarizes the incremental change in income for Project ARRIBA participants and a benefit-cost ratio analysis for year 2015. Estimates are given in 2015 USD. The total investment was $1.315 million. The net increase in income of Project ARRIBA graduates was $20.77 million, or $0.281 million per participant. For 2015, Project ARRIBA added $20.77 million in value to the El Paso economy. The benefit-cost ratio implies $15.79 in benefits for every $1.00 invested.

Table 8. Summary of Increase in Stock of Human Capital Results for 2015

Project ARRIBA, 2015 Dollars	
Net Increase in Income (Million)	$20.77
Increase in value of future income per participant (Million)	$0.281
PA Investment in 2015 (Million)	$1.315
Benefit/Cost Ratio	15.79

Source: *The Hunt Institute.*

Figure 6. Return on Investments of Project ARRIBA, 2015

Source: *The Hunt Institute.*

Table 11 below shows the overall incremental effects on El Paso stock of human capital and benefit-cost ratio of Project ARRIBA graduates from 2015-2019, in 2019 USD. The number of graduates is shown for each year followed by the present value of the net increase in human capital stock. The incremental change in earnings of participants confirms the significant impact on the El Paso economy.

In 2019, Project ARRIBA had a graduating class of 80 individuals that supported an increase of future earnings of approximately $23.54 million in the region, or $294 thousand per graduate. Also, for 2019 the total amount invested was $1.519 million. The benefit-cost ratio was 15.50 which means Project ARRIBA supported $15.50 in benefits for each $1.00 invested. This indicates that the program's estimated benefits significantly outweighed its costs in 2019.

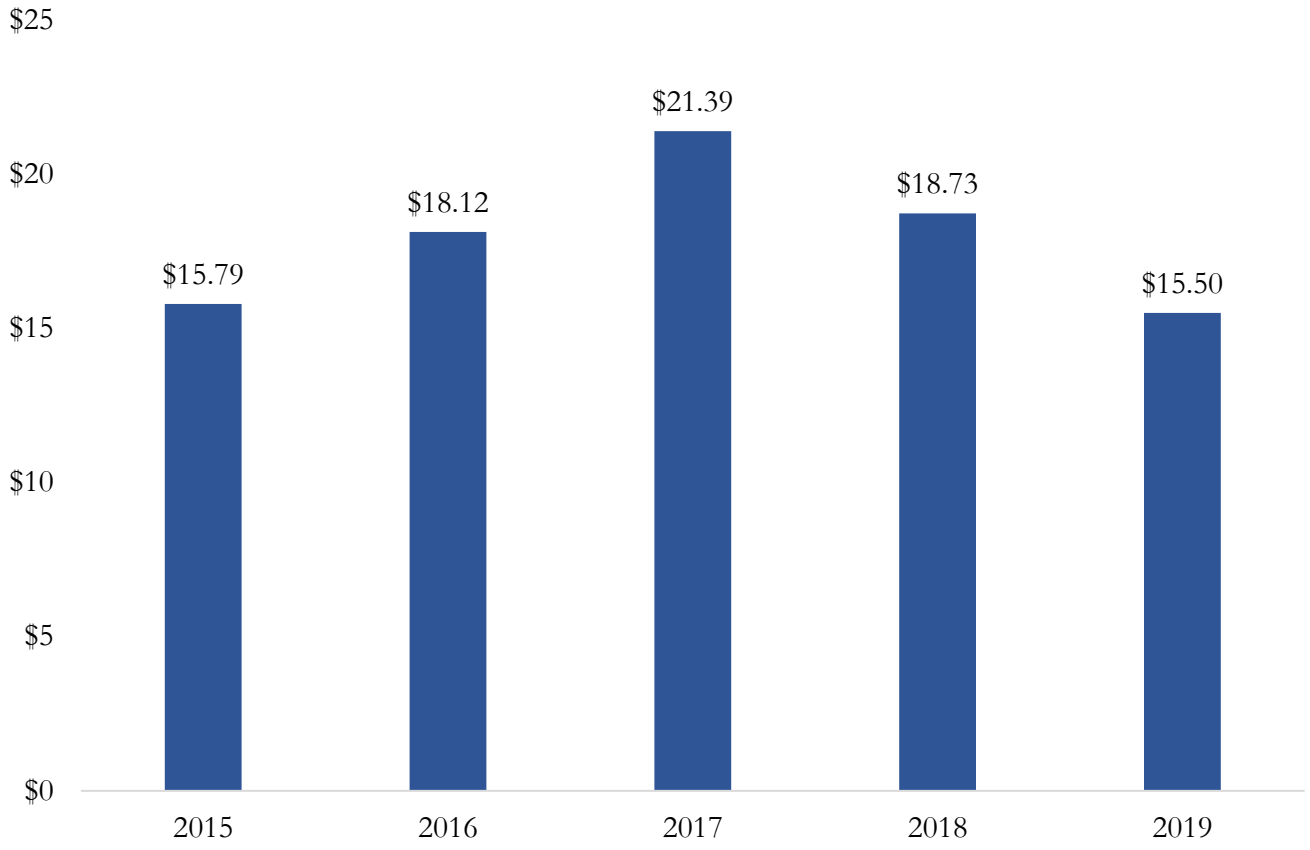
The cumulative in human capital stock in 2015 includes the added human capital stock since 2001. As of 2019, Project ARRIBA has added about $893.30 million in value to the El Paso economy in the form of future earnings of program graduates. Moreover, Project ARRIBA has supported about $31.699 million in total investment over the life of the program which implies a cumulative benefit-cost ratio of $28.18 for every $1.00 invested.

Table 3. Incremental Effects on El Paso Stock of Human Capital and Benefit/Cost Ratio, 2019 Dollars

Year	2015	2016	2017	2018	2019
Number of Graduates	74	77	92	90	80
Present Value (2019 $, Million) Net Increase in Human Capital Stock	$22.41	$25.56	$29.28	$26.12	$23.54
Cumulative in Human Capital Stock (2019 $, Million)	$788.80	$814.36	$843.64	$869.76	$893.30
Cumulative Benefit/Cost Ratio (Public/ Private Investment $31.699 in 2019 $, Million)		25.69	26.61	27.44	28.18
Benefit/Cost Ratio for 2019 (Net Increase in Human Capital Stock from 2019 Graduates/PA Investment in 2019 of $1.519 million)					15.50

Source: *The Hunt Institute.*

Graph 3. Return on Investments of Project ARRIBA Program in Current USD



Source: *The Hunt Institute.*

VI. Conclusion

Project ARRIBA is a job training program that invests in human capital to improve the lives of economically disadvantaged individuals in the El Paso region. At the same time, Project ARRIBA helps meet local employer demands by building and retaining a highly skilled workforce for demanded occupations. For 2019, the total economic value added to the El Paso region due to Project ARRIBA activities alone was about $2.385 million. In addition, Project ARRIBA graduates added to the region approximately $23.54 million in value. The economic impact results demonstrate that private and public investment in Project ARRIBA has produced notable results for the El Paso economy.

VII. Source

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