

The Annual Economic Impact of Benefits Payments to Retirees by the City of Fresno Retirement System (CFRS)

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EXECUTIVE SUMMARY

The main goal of this study is to assess the annual economic impact from benefits payments to retirees by the City of Fresno Retirement Systems (CFRS) on the regional economies of the City of Fresno, Fresno County and San Joaquin Valley. The presence of CFRS in the impacted regions fosters economic growth and contributes to the stability of state and local government finances. Among the contributions to the regional economy attributable to the benefits payments to retirees, CFRS directly and indirectly supports jobs and plays an important role in the spending of dollars with local vendors. This spending generates additional sales and income for local firms and residents, which subsequently lead to further spending and income in an economic ripple effect. Thus, CFRS supports many businesses and families not directly connected to it. Key findings of the study include:

- As of June 2007, the total net assets available for CFRS retirees amounted to \$2.26 billion. 2.9% come from CFRS members, 3.5% from employers and 93.5% of annual additions are produced by investment gains.
- CFRS provided services and benefits to 5,954 active and inactive members at the end of 2007. Of this number, 2,154 members currently receive annual benefits averaging \$49,414 per FPRS member and \$25,433 per ERS member.
- More than 83% of CFRS retirees are residents of the San Joaquin Valley. In addition, within the San Joaquin Valley, Fresno County is home of almost 92% of CFRS retirees, while the City of Fresno is home to more than 76% of CFRS retirees in Fresno County.
- The impact analysis shows that the \$43.21 million paid to CFRS retirees residing in the City of Fresno produce a total effect of \$58.86 million in terms of output and support a total of 410 jobs in the City. The total impact on labor income, which includes employee compensation and proprietors income amounts to \$14.34 million. The impact in terms of new goods and services produced in the economy of the City amounts to \$26.93 million and the total estimated tax revenue generated for the State of California and its local governments is greater than \$3.88 million.
- The \$58.98 million paid to CFRS retirees residing in the Fresno County produce a total effect of \$80.39 million in terms of output and support a total of 546 jobs in the County. The total impact on labor income amounts to \$19.07 million. The impact in terms of new goods and services produced in the economy of the County amounts to \$36.16 million and the total estimated tax revenue generated for the State of California and its local governments is greater than \$5.04 million.
- The \$63.91 million paid to CFRS retirees residing in the San Joaquin Valley produce a total effect of \$87.83 million in terms of output and support a total of 563 jobs. The total impact on labor income amounts to \$19.74 million. The impact in terms of new goods and services produced in the economy of the San Joaquin Valley amounts to \$38.19 million and the total estimated tax revenue generated for the State of California and its local governments is greater than \$5.35 million.

I. Introduction

I.1 Purpose of the Study

The City of Fresno Retirement Systems (CFRS) consists of two systems, the Employees Retirement System (ERS) which provides retirement allowances and other benefits to the non-safety members employed by the City of Fresno, and the Fire and Police Retirement System (FPRS) which provides retirement allowances to all full-time sworn safety members employed by the City of Fresno. Both systems also provide lifetime retirement, disability, and death benefits to its members. The main goal of this study is to assess the annual economic impact from benefits payments to retirees by both, the Employees Retirement System (ERS) and the Fire and Police Retirement System (FPRS) on the regional economies of the City of Fresno, Fresno County and San Joaquin Valley.

I.2 Scope and Methodology

The impact attributable to the benefits payments to CFRS retirees is obviously linked to the impact attributable to the ways retirees spend this income as well as the places in which they do so. Thus, it is essential to the accuracy of this study to know how much of these benefits payments is actually spent and where. Such impact is measured in four different areas:

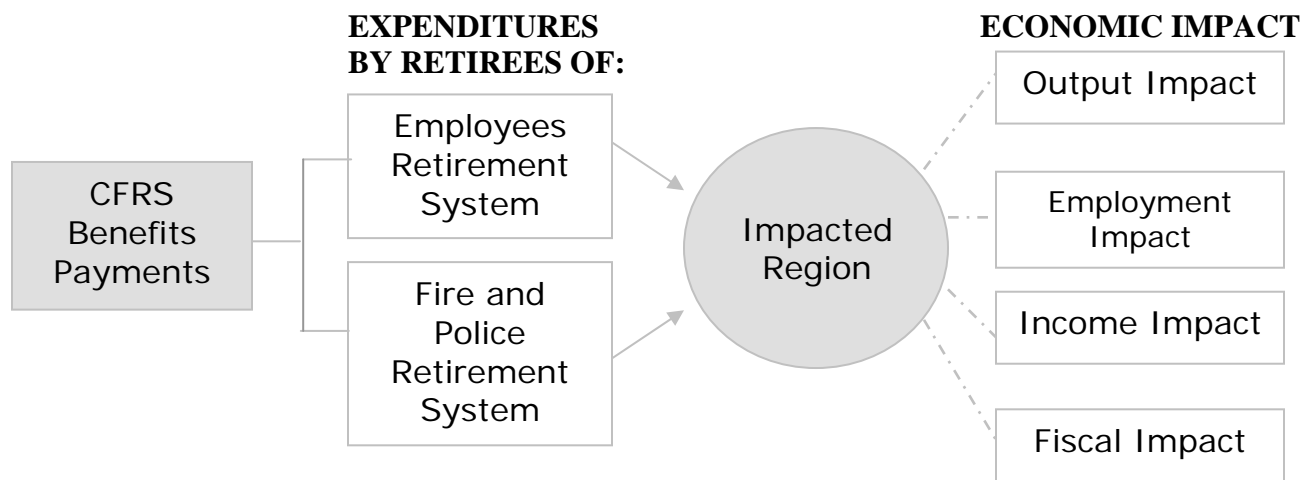
- 1) Additional output (business sales).
- 2) Number of jobs that these benefits payments support directly and indirectly.
- 3) Additional labor income.
- 4) Additional local and state tax revenue.

Following the North American Classification System (NAICS) code¹, the distribution by industry of this impact is also assessed. For the purposes of this study there are three impacted regions to examine: the City of Fresno, Fresno County and the San Joaquin Valley (composed of Fresno, Kern, Kings, Madera, Merced, San Joaquin,

¹ NAICS replaced the U.S. Standard Industrial Classification (SIC) system and was developed jointly by the U.S., Canada, and Mexico to provide new comparability in statistics about business activity across North America.

Stanislaus and Tulare counties). Figure 1 illustrates the conceptual framework of the economic impact analysis. The main tool employed for this investigation is IMPLAN, a computer software package that consists of procedures for estimating input-output models, which are techniques for quantifying interactions between firms, industries, and social institutions within a regional economy.² The economic data for IMPLAN come from the system of national accounts for the United States based on data collected by the U. S. Department of Commerce, the U.S. Bureau of Labor Statistics, and other federal and state government agencies.

Figure 1: Conceptual Framework



The total economic impact of the benefits payments to retirees in the impacted regions, also known as the multiplier effect, is equal to the sum of three components: the *direct* effect, the *indirect* effect and the *induced* effect. The direct effect is the immediate upshot caused by retirees' expenditures. Due to the interactions between firms, industries, and social institutions that naturally occur within the local economy, the direct effect initiates a series of iterative rounds of income creation, spending and re-spending that result in indirect and induced effects. The indirect effects are changes in production,

² Minnesota IMPLAN Group, Inc. or MIG, Inc was founded in 1993 by Scott Lindall and Doug Olson as an outgrowth of their work at the University of Minnesota starting in 1984. Currently, there are over 1,500 active users of IMPLAN databases and software in the United State as well as internationally.

employment and income that result from the inter-industry purchases triggered by the direct effect. Finally, induced effects arise due to changes in household income and spending patterns caused by direct and indirect effects. Since the total impact of retirees' expenditures is a multiple of the initial expenditures, the total effect is expressed as a multiplier effect, that is, the sum of the direct, indirect and induced effects. Therefore, the total impact of retirees' expenditures on the impacted economy as estimated by IMPLAN is larger than the initial expenditures. For example, an output multiplier of 1.5 indicates that for every million dollars spent (direct expenditure) an additional 0.5 million dollars is generated within the regional economy. Similarly, an employment multiplier of 1.6 indicates that for each job created by direct expenditure, an additional 0.6 jobs are created or supported.

It is also important to underline that the increases in economic activity resulting from the multiplier process become smaller with each round due to leakages from the spending stream. To be exact, spending on goods and services that are not produced within the regional economy do not generate additional local spending. Therefore, the multiplier process traces the flows of spending and re-spending until the initial expenditures have completely leaked out to other regions. To properly estimate the effects at the regional level, an adjustment known as the regional purchase coefficient is implemented within the IMPLAN system. The regional purchase coefficient represents the proportion of the total supply of a good or service used to fulfill the demands of a region that is supplied by the region to itself. For example, a regional purchase coefficient of 0.7 for peaches, indicates that 70% of the demand by peach processors, peach wholesalers and retailers, foreign exports, and all other demands for peaches are met by local producers. Thus, 30% of the demand leaves the region to buy "imports". Typically, since the leakage is larger the smaller the impacted regions is, it is expected that the economic impact be relatively small for the City of Fresno and relatively larger for the whole SJV region.

II. The City of Fresno Retirement Systems (CFRS)

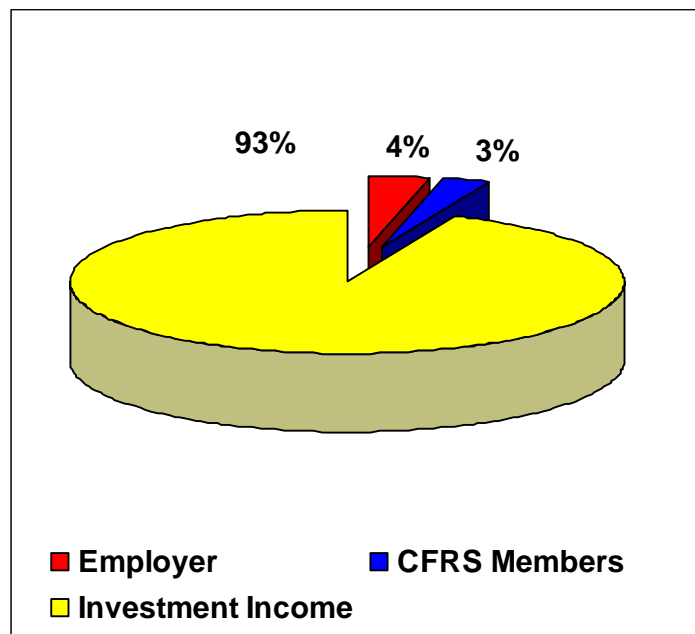
The City of Fresno Retirement Systems (CFRS) consists of two systems, the Employees Retirement System (ERS) and the Fire and Police Retirement System (FPRS). The ERS was established on June 1, 1939, under Charter Section 910 and is governed by Article 18 of Chapter 2 of the City of Fresno Municipal Code. The System provides retirement allowances and other benefits to the non-safety members employed by the City of Fresno. The FPRS was established on July 1, 1955, under charter Section 910 and is governed by Article 17 and 17A of Chapter 2 of the City of Fresno Municipal Code. Effective August 27, 1990, the City added a Second Tier that includes all full-time sworn Fire, Police, and Airport Safety personnel hired on or after that date. The System provides retirement allowances to all full-time sworn safety members employed by the City of Fresno. Both systems also provide lifetime retirement, disability, and death benefits to its members.

The Employees Retirement System Retirement Board has five (5) members, two (2) management employees who are appointed by the Mayor and confirmed by the City Council, one (1) employee who is elected by the members representing the manual workers of the System, and one (1) employee who is elected by the members representing the clerical or supervisory workers of the System, both of which serve a four-year term. The fifth and final member of the Board is a qualified elector of the City, not connected with its government, elected by the previously designated four members. The Retirement Board is responsible for the prudent investment of member and employer contributions, and defraying reasonable expenses of administration.

The City of Fresno Fire and Police Retirement Board is a five-member board composed of two management employees appointed by the Mayor and confirmed by the City Council, one member that is elected by the Fire members and one elected by Police members; and a fifth member who is not connected with the City and appointed by the previous four members. The Retirement Board is responsible for the prudent investment of member and employer contributions, and defraying reasonable expenses of administration. The Retirement Boards are responsible for the prudent investment of member and employer contributions, and defraying reasonable expenses of administration.

As of June 2007, the total net assets available for CFRS retirees amounted to \$2.26 billion. The retirement fund is composed by \$1.06 billion from the ERS and \$1.20 billion from the FPRS. Employers and employees share in supporting this retirement fund. Figure 2 shows the composition of annual contributions to the retirement fund by source. Approximately 3% come from CFRS members, 4% from employers and 93% of annual additions are produced by investment gains.

Figure 2: Annual Contributions by Source for FY Ended June 30, 2007



SOURCE: Author's calculations based on CFRS data.

CFRS provided services and benefits to 5,954 active and inactive members at the end of 2007. Of this number, 2,154 members currently receive benefits averaging \$34,780 per member annually. Table 1 shows the geographical distribution of benefits payments to CFRS retirees in 2007. 83.6% of CFRS retirees are residents of the San Joaquin Valley which means that most of the total benefits paid -85.3%- stay within this region. In addition, within the San Joaquin Valley, Fresno County is home of almost 92% of CFRS retirees, while the City of Fresno is home to more than 76% of CFRS retirees in Fresno County. On the other hand, it is worth mentioning that 9% of the total benefits are

paid to residents to states other than California and 0.1% is paid to Canadian residents. Finally, in terms of the size of the average benefits paid within the San Joaquin Valley, CFRS retirees in the City of Fresno rank fourth with \$34,028 annually, after CFRS retirees of Madera County (with an average benefit payment of \$36,628), retirees of Fresno County (with an average of \$35,663) and the retirees of the San Joaquin Valley as a whole (with an average of \$35,510).

Table 1: Geographical Distribution of Benefits Payments to CFRS Retirees

Region	Total Number of Receptients	Total Amount Paid	Average Benefits	% of Total Receptients
United States	2,154	\$74,915,341	\$34,780	100.0%
California	1,961	\$68,868,491	\$35,119	91.0%
San Joaquin Valley	1,800	\$63,918,138	\$35,510	83.6%
Other U.S States	193	\$6,046,849	\$31,331	9.0%
Canada	2	\$69,004	\$34,502	0.1%
				% of Total Receptients in San Joaquin Valley
San Joaquin Valley	1,800	\$63,918,138	\$35,510	100.0%
Fresno County	1,654	\$58,986,106	\$35,663	91.9%
Kings County	8	\$191,781	\$23,973	0.4%
Kern County	5	\$138,930	\$27,786	0.3%
Madera County	96	\$3,516,248	\$36,628	5.3%
Merced County	6	\$144,111	\$24,019	0.3%
Stanislaus County	7	\$152,422	\$21,775	0.4%
San Joaquin County	1	\$18,773	\$18,773	0.1%
Tulare County	23	\$769,766	\$33,468	1.3%
				% of Total Receptients in Fresno County
City of Fresno	1,270	\$43,216,003	\$34,028	76.8%

SOURCE: Author's calculations based on CFRS data.

III. The Impacted Regional Economies in Perspective

This section presents a brief overview of the regional economies of the City of Fresno, Fresno County and the San Joaquin Valley, which are the impacted areas under examination. The aim is to provide an overview of the size and main characteristics of these regional economies in order to gain a better perspective on the magnitude of the economic impacts presented in the following sections. All data shown are for 2006, the most recent year for which detailed data are available. Table 2 shows an overview of the economy of the City of Fresno.

Table 2: The Economy of the City of Fresno, 2006

Industry 2-digit NAICS	Output	Employment	Employee Compensation	Total Value Added
Ag, Forestry, Fish & Hunting	\$473	9,254	\$198	\$286
Mining	\$16	46	\$3	\$9
Utilities	\$679	966	\$82	\$269
Construction	\$2,856	21,492	\$888	\$1,335
Manufacturing	\$6,293	19,164	\$851	\$1,650
Wholesale Trade	\$1,934	12,761	\$681	\$1,304
Transportation & Warehousing	\$1,408	12,035	\$459	\$785
Retail trade	\$2,204	31,297	\$795	\$1,463
Information	\$923	3,860	\$235	\$418
Finance & insurance	\$2,379	13,650	\$634	\$1,355
Real estate & rental	\$2,002	10,331	\$141	\$1,284
Professional-scientific & tech services	\$1,799	15,842	\$520	\$930
Management of companies	\$413	2,669	\$165	\$213
Administrative & waste services	\$1,038	18,772	\$455	\$636
Educational services	\$226	4,956	\$87	\$113
Health & social services	\$3,040	36,668	\$1,386	\$1,884
Arts- entertainment & recreation	\$133	3,638	\$48	\$80
Accommodation & food services	\$978	19,137	\$308	\$476
Other services	\$1,243	23,075	\$443	\$632
Government	\$5,038	45,626	\$2,887	\$4,589
TOTAL	\$35,073	305,236	\$11,267	\$19,712

NOTE: Output, Employee Compensation and Total Value Added data are in millions of dollars.

SOURCE: IMPLAN

Total business sales and government revenues (labeled “Output”) was about \$35.07 billion. Of this amount, the value of all goods and services produced in the economy of the City –the equivalent to Gross Domestic Product for the nation- totaled \$19.71 billion. This amount represents almost 70% of the total value added for Fresno

County. In 2006, there were about 305,236 full and part-time jobs, earning a total compensation of approximately \$11.26 billion. In addition, Table 2 shows that in terms of output, manufacturing and the government sectors are the largest with 17.9% and 14.3% respectively. In terms of employment, the government, health and social services, retail trade and construction sectors support almost 45% of the total jobs in the City. Finally, in terms of value added (new value created in the local economy), the government (23.2%), health and social services (9.5%) and manufacturing (8.3%) are the largest contributors.

Table 3 shows an overview of the economy of the County of Fresno.

Table 3: The Economy of Fresno County, 2006

Industry 2-digit NAICS	Output	Employment	Employee Compensation	Total Value Added
Ag, Forestry, Fish & Hunting	\$4,730	60,033	\$1,266	\$2,632
Mining	\$64	187	\$12	\$37
Utilities	\$1,069	1,712	\$143	\$442
Construction	\$3,981	29,880	\$1,234	\$1,860
Manufacturing	\$10,305	29,514	\$1,360	\$2,566
Wholesale Trade	\$2,363	15,592	\$832	\$1,593
Transportation & Warehousing	\$1,707	14,735	\$561	\$949
Retail trade	\$3,165	44,202	\$1,145	\$2,092
Information	\$1,156	4,593	\$280	\$526
Finance & insurance	\$2,644	15,190	\$708	\$1,530
Real estate & rental	\$2,296	12,304	\$169	\$1,479
Professional-scientific & tech services	\$2,167	19,219	\$614	\$1,097
Management of companies	\$473	3,060	\$189	\$243
Administrative & waste services	\$1,181	21,157	\$509	\$716
Educational services	\$259	5,678	\$99	\$130
Health & social services	\$3,799	45,015	\$1,739	\$2,348
Arts- entertainment & recreation	\$193	4,815	\$69	\$116
Accommodation & food services	\$1,364	26,552	\$428	\$664
Other services	\$1,536	28,134	\$522	\$786
Government	\$7,226	63,504	\$4,018	\$6,577
TOTAL	\$51,678	445,076	\$15,897	\$28,383

NOTE: Output, Employee Compensation and Total Value Added data are in millions of dollars.

SOURCE: IMPLAN

Total business sales and government revenues (labeled “Output”) was about \$51.67 billion. Of this amount, the value of all goods and services produced in the economy of the County totaled \$28.38 billion, which represent more than 25% of the

total value added in the whole San Joaquin Valley. In 2006, there were about 445,076 full and part-time jobs, earning a total compensation of approximately \$15.89 billion.

In addition Table 3 shows that, similar to the City of Fresno, in terms of output, manufacturing and the government sectors are the largest with 19.9% and 13.9% of total County output respectively. In terms of employment, the agriculture, forestry, fishing and hunting sector alone represents more than 13.4% of the total. This sector together with the government, health and social services, and retail trade support almost 48% of the total jobs in the County. Finally, in terms of value added (new value created in the County's economy), the government (23.1%), agriculture, forestry, fishing and hunting (9.2%) and manufacturing (9.0%) are the largest contributors.

Table 4 shows an overview of the economy of the San Joaquin Valley.

Table 4: The Economy of the San Joaquin Valley, 2006

Industry 2-digit NAICS	Output	Employment	Employee Compensation	Total Value Added
Ag, Forestry, Fish & Hunting	\$22,366	240,129	\$5,110	\$10,833
Mining	\$4,832	10,644	\$1,126	\$3,041
Utilities	\$3,870	5,713	\$485	\$2,036
Construction	\$16,165	119,621	\$4,811	\$7,632
Manufacturing	\$49,476	116,395	\$6,370	\$10,741
Wholesale Trade	\$7,925	51,581	\$2,721	\$5,344
Transportation & Warehousing	\$8,184	71,438	\$2,773	\$4,664
Retail trade	\$13,208	177,273	\$4,654	\$8,692
Information	\$4,110	16,585	\$879	\$1,791
Finance & insurance	\$7,887	43,815	\$2,101	\$4,605
Real estate & rental	\$8,447	46,523	\$639	\$5,517
Professional-scientific & tech services	\$7,082	60,891	\$2,059	\$3,599
Management of companies	\$1,837	12,470	\$711	\$915
Administrative & waste services	\$4,367	83,840	\$1,839	\$2,685
Educational services	\$742	15,615	\$327	\$395
Health & social services	\$13,038	159,937	\$6,024	\$8,101
Arts- entertainment & recreation	\$764	16,855	\$255	\$448
Accommodation & food services	\$4,908	96,270	\$1,516	\$2,387
Other services	\$5,529	99,423	\$1,780	\$2,817
Government	\$29,236	254,066	\$15,867	\$26,399
TOTAL	\$213,973	1,699,084	\$62,047	\$112,642

NOTE 1: Output, Employee Compensation and Total Value Added data are in millions of dollars.

NOTE 2: The San Joaquin Valley is composed of Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare counties.

SOURCE: IMPLAN

Total business sales and government revenues (labeled “Output”) was about \$213.97 billion. Of this amount, the value of all goods and services produced in the economy of the Valley totaled \$112.64 billion, which represents almost 6.5% of the total value added for the State of California. In 2006, there were about 1,699,084 full and part-time jobs, earning a total compensation of approximately \$62.04 billion.

In addition Table 4 shows that, similar to Fresno County, manufacturing and the government sectors are the largest with 23.1% and 13.6% of total output in the Valley respectively. In terms of employment, the agriculture, forestry, fishing and hunting sector alone represents more than 14.3% of the total. This sector together with the government, health and social services, and retail trade support almost 49% of the total jobs in the Valley. Finally, in terms of value added (new value created in the local economy), the government (23.4%), agriculture, forestry, fishing and hunting (9.6%) and manufacturing (9.5%) are the largest contributors.

IV. Annual Economic Impacts in the City of Fresno

The impact analysis shows that the \$43.21 million paid to CFRS retirees residing in the City of Fresno produce a total effect of \$58.86 million in terms of output (see Table 5). Output is measured by the total value of purchases by intermediate and final consumers. Therefore output can also be thought as the value of total business sales. In addition, expenditures attributable to benefits paid to CFRS retirees in the City of Fresno support a total of 410 full-time and part-time jobs in the City. The total impact on labor income, which includes employee compensation and proprietors income amounts to \$14.34 million. The impact in terms of new goods and services produced in the economy of the City (value added) amounts to \$26.93 million. Finally, the total estimated tax revenue generated for the State of California and its local governments is greater than \$3.88 million. IMPLAN does not produce separate reports for the state and local government. Due to the complexity of the fiscal structure in California as well as its changing nature, it is very difficult to estimate how much of this total tax revenue is retained by or returned to cities or counties. However, based on state and county local government information from the U.S. Census Bureau, it is possible to approximate the percentage of total tax revenue that Fresno County captures from the state's total (2.3%). Therefore, the state and local tax revenue calculated by IMPLAN can be decomposed into \$89,333 for the City (approximately) and \$3.79 million for the state.

Table 5: Annual Economic Impacts of CFRS Benefits Paid to Fresno City Retirees

City of Fresno	Direct	Indirect	Induced	Total
Total Output	\$43,216,003	\$7,904,362	\$7,742,183	\$58,862,548
Value Added	\$17,809,920	\$4,382,633	\$4,738,097	\$26,930,650
Labor Income	\$9,052,369	\$2,734,159	\$2,559,968	\$14,346,496
Employment	269	68	73	410
State and Local Taxes				\$3,884,039
Local Taxes				\$89,333
State taxes				\$3,794,706

Source: Author's calculations based on IMPLAN

The magnitude of this economic impact can be better illustrated by comparing the value added produced by CFRS benefits with other industries. Although it is possible to

also compare employment or labor income figures, value added represents the value of new goods and services produced in a given year. Therefore, using value added figures seems more meaningful in terms of assessing the relative magnitude of the economic impact. As can be seen from Table 2, the total value added (\$26.93 million) produced by CFRS benefits is only larger than the mining sector when disaggregating industries at the 2 digit level NAICS code. However, when disaggregating industries at the 3 digit level, the comparison is more revealing. Table 6 shows that the total value added produced by CFRS benefits is larger than the value added produced by an assorted list of industries, including Apparel and Textile Products Manufacturing, Transit and ground passengers and even Plastics and Rubber Production.

Table 6: Comparing Value Added Produced by CFRS Benefits Paid to Other Industries, City of Fresno, 2006

Industry 3-digit NAICS	Total Value Added
114 Fishing- Hunting & Trapping	\$91,000
483 Water transportation	\$307,000
316 Leather & Allied	\$358,000
113 Forestry & Logging	\$538,000
486 Pipeline transportation	\$731,000
313 Textile Mills	\$2,652,000
334 Computer & oth electron	\$3,032,000
525 Funds- trusts & other finan	\$3,962,000
331 Primary metal mfg	\$5,529,000
315 Apparel Mfg	\$5,798,000
335 Electrical eqpt & appliances	\$6,208,000
512 Motion picture & sound recording	\$6,747,000
314 Textile Products	\$7,013,000
213 Mining services	\$9,208,000
712 Museums & similar	\$9,591,000
112 Livestock	\$9,879,000
518 Internet & data process svcs	\$13,339,000
485 Transit & ground passengers	\$23,130,000
326 Plastics & rubber production	\$23,367,000
CFRS Benefits Paid to Retirees	\$26,930,650

Source: Author's calculations based on IMPLAN

The total economic impact on the City of Fresno can be broken by industry. For simplicity and clarity to illustrate, the level of industry aggregation follows NAICS at the 2 digit level. Table 7 shows the results of this analysis. CFRS benefits paid and related

spending impact is seen primarily in the health and social services, retail trade, finance and insurance, and government sectors. These four industrial sectors amount to more than 55% of the total output impact in the City’s economy and for more than 48% of the total jobs supported.

Table 7: Annual Economic Impact by Industry of CFRS Benefits Paid to City of Fresno Retirees

Industry 3-digit NAICS	Output	Employment	Labor Income	Total Value Added
Ag, Forestry, Fish & Hunting	\$137,288	1	\$31,531	\$54,317
Mining	\$0	0	\$0	\$0
Utilities	\$701,146	1	\$90,082	\$243,668
Construction	\$366,885	2	\$126,828	\$130,473
Manufacturing	\$2,800,162	8	\$393,883	\$584,371
Wholesale Trade	\$3,832,363	19	\$1,080,950	\$1,925,075
Transportation & Warehousing	\$1,369,331	10	\$457,446	\$572,449
Retail trade	\$8,145,199	88	\$2,497,960	\$4,015,720
Information	\$1,742,289	5	\$328,905	\$582,982
Finance & insurance	\$5,542,890	23	\$1,226,806	\$2,243,173
Real estate & rental	\$3,500,361	17	\$448,829	\$1,748,104
Professional-scientific & tech services	\$2,491,403	17	\$827,131	\$976,977
Management of companies	\$643,345	3	\$191,653	\$246,985
Administrative & waste services	\$1,306,813	17	\$469,575	\$577,240
Educational services	\$870,264	14	\$290,705	\$326,609
Health & social services	\$9,378,611	83	\$3,751,166	\$4,325,629
Arts- entertainment & recreation	\$449,540	9	\$159,707	\$200,802
Accomodation & food services	\$3,542,265	52	\$877,367	\$1,273,701
Other services	\$2,406,341	36	\$780,077	\$948,410
Government	\$9,636,052	4	\$315,895	\$5,953,965
TOTAL	\$58,862,548	410	\$14,346,496	\$26,930,650

Source: Author’s calculations based on IMPLAN

V. Annual Economic Impacts in Fresno County

The impact analysis shows that the \$58.98 million paid to CFRS retirees residing in the Fresno County produce a total effect of \$80.39 million in terms of output, which can also be thought as the value of total business sales (see Table 8). In addition, expenditures attributable to benefits paid to CFRS retirees in Fresno County support a total of 546 full-time and part-time jobs in the County. The total impact on labor income, which includes employee compensation and proprietors income amounts to \$19.07 million. The impact in terms of new goods and services produced in the economy of the County (value added) amounts to \$36.16 million. Finally, the total estimated tax revenue generated for the State of California and its local governments is greater than \$5.04 million. IMPLAN does not produce separate reports for the state and local government. However, based on state and county local government information from the U.S. Census Bureau, it is possible to calculate the percentage of total tax revenue that Fresno County captures from the state's total (2.3%). Therefore, the state and local tax revenue calculated by IMPLAN can be decomposed into \$115,995 for the County and \$4.92 million for the state.

Table 8: Economic Impacts of CFRS Benefits Paid to Fresno County Retirees

Fresno County	Direct	Indirect	Induced	Total
Total Output	\$58,986,106	\$10,399,815	\$11,004,851	\$80,390,772
Value Added	\$23,784,786	\$5,658,381	\$6,723,555	\$36,166,722
Labor Income	\$11,987,944	\$3,491,752	\$3,596,189	\$19,075,885
Employment	355	88	103	546
State and Local Taxes				\$5,043,248
Local Taxes				\$115,995
State taxes				\$4,927,253

Source: Author's calculations based on IMPLAN

Similar to the previous section, the magnitude of this economic impact can be better illustrated by comparing the value added produced by CFRS benefits with other industries. As can be seen from Table 3, the total value added produced by CFRS benefits is close to the size of the mining sector when disaggregating industries at the 2 digit level

NAICS code. However, when disaggregating industries at the 3 digit level, the comparison is more revealing. Table 9 shows that the total value added produced by CFRS benefits (\$36.16 million) is larger than the value added produced by an assorted list of industries, including Apparel Manufacturing, Internet and data process services, and even Plastic and Rubber Production.

The total economic impact on Fresno County can be broken by industry. Table 10 shows the results of this analysis. CFRS benefits paid and related spending impact is seen primarily in the health and social services, retail trade, finance and insurance, and government sectors. These industrial sectors amount to more than 55% of the total output impact in the County’s economy and for more than 48% of the total jobs supported.

Table 9: Comparing Value Added Produced by CFRS Benefits Paid to Other Industries, Fresno County, 2006

Industry 3-digit NAICS	Total Value Added
483 Water transportation	\$392,000
316 Leather & Allied	\$655,000
211 Oil & gas extraction	\$723,000
114 Fishing- Hunting & Trapping	\$1,347,000
313 Textile Mills	\$2,652,000
486 Pipeline transportation	\$3,862,000
525 Funds- trusts & other finan	\$5,283,000
113 Forestry & Logging	\$6,956,000
315 Apparel Mfg	\$7,191,000
314 Textile Products	\$7,822,000
512 Motion picture & sound recording	\$8,573,000
712 Museums & similar	\$10,580,000
331 Primary metal mfg	\$13,520,000
518 Internet & data process svcs	\$14,467,000
335 Electrical equip. & appliances	\$16,624,000
485 Transit & ground passengers	\$25,470,000
711 Performing arts & spectator sports	\$32,818,000
326 Plastics & rubber production	\$35,675,000
CFRS Benefits Paid to Retirees	\$36,166,722

Source: Author’s calculations based on IMPLAN

**Table 10: Annual Economic Impact by Industry of CFRS Benefits Paid
To Fresno County Retirees**

Industry 3-digit NAICS	Output	Employment	Labor Income	Total Value Added
Ag, Forestry, Fish & Hunting	\$960,433	5	\$133,198	\$255,572
Mining	\$1,062	0	\$202	\$497
Utilities	\$1,087,774	2	\$162,175	\$399,138
Construction	\$496,938	3	\$169,933	\$174,539
Manufacturing	\$3,898,278	11	\$526,622	\$789,535
Wholesale Trade	\$4,865,862	24	\$1,351,801	\$2,407,437
Transportation & Warehousing	\$1,888,104	13	\$616,246	\$772,502
Retail trade	\$11,080,901	116	\$3,374,658	\$5,369,182
Information	\$2,346,673	7	\$430,860	\$773,238
Finance & insurance	\$7,304,878	30	\$1,567,053	\$2,954,060
Real estate & rental	\$4,581,661	22	\$576,598	\$2,261,075
Professional-scientific & tech services	\$3,291,476	22	\$1,070,018	\$1,271,998
Management of companies	\$678,878	3	\$199,194	\$256,702
Administrative & waste services	\$1,759,386	23	\$623,779	\$765,965
Educational services	\$1,025,212	17	\$332,079	\$380,305
Health & social services	\$12,876,520	113	\$5,080,791	\$5,858,510
Arts- entertainment & recreation	\$697,467	12	\$232,380	\$306,825
Accommodation & food services	\$4,952,036	72	\$1,206,518	\$1,753,022
Other services	\$3,213,829	48	\$1,002,350	\$1,240,456
Government	\$13,383,405	6	\$419,430	\$8,176,164
TOTAL	\$80,390,772	546	\$19,075,885	\$36,166,722

Source: Author's calculations based on IMPLAN

VI. Annual Economic Impacts in the San Joaquin Valley

The impact analysis shows that the \$63.91 million paid to CFRS retirees residing in the San Joaquin Valley produce a total effect of \$87.83 million in terms of output, which can also be thought as the value of total business sales (see Table 11). In addition, expenditures attributable to benefits paid to CFRS retirees in the San Joaquin Valley support a total of 563 full-time and part-time jobs. The total impact on labor income, which includes employee compensation and proprietors income amounts to \$19.74 million. The impact in terms of new goods and services produced in the economy of the San Joaquin Valley (value added) amounts to \$38.19 million. Finally, the total estimated tax revenue generated for the State of California and its local governments is greater than \$5.35 million. IMPLAN does not produce separate reports for the state and local government. However, based on state and county local government information from the U.S. Census Bureau, it is possible to calculate the percentage of total tax revenue that the 8 San Joaquin Valley counties together capture from the state's total (10.04%). Therefore, the state and local tax revenue calculated by IMPLAN can be decomposed into \$537,784 for the counties in the Valley and \$4.81 million for the state.

Table 11: Economic Impacts of CFRS Benefits Paid to San Joaquin Valley Retirees

San Joaquin Valley	Direct	Indirect	Induced	Total
Total Output	\$63,918,138	\$12,273,853	\$11,638,423	\$87,830,414
Value Added	\$25,053,862	\$6,260,176	\$6,881,457	\$38,195,495
Labor Income	\$12,458,108	\$3,683,172	\$3,606,406	\$19,747,686
Employment	368	92	103	563
State and Local Taxes				\$5,356,410
Local Taxes				\$537,784
State taxes				\$4,818,626

Source: Author's calculations based on IMPLAN

Similar to the previous section, the magnitude of this economic impact can be better illustrated by comparing the value added produced by CFRS benefits with other industries. As can be seen from Table 4, the total value added produced by CFRS benefits is significantly smaller than all individual industries when disaggregating industrial

activity at the 2 digit level NAICS code. However, when disaggregating industries at the 3 digit level, the comparison is more revealing. Table 12 shows that the total value added produced by CFRS benefits (\$38.19 million) is larger than the value added produced by an assorted list of industries, including Water Transportation, Apparel Manufacturing and Textile Products.

Table 12: Comparing Value Added Produced by CFRS Benefits Paid to Other Industries, San Joaquin Valley, 2006

Industry 3-digit NAICS	Total Value Added
114 Fishing- Hunting & Trapping	\$3,932,000
316 Leather & Allied	\$4,120,000
313 Textile Mills	\$6,440,000
483 Water transportation	\$8,336,000
315 Apparel Mfg	\$20,098,000
712 Museums & similar	\$25,436,000
525 Funds- trusts & other finan	\$32,861,000
512 Motion picture & sound recording	\$34,613,000
314 Textile Products	\$34,657,000
CFRS Benefits Paid to Retirees	\$38,195,495

Source: Author's calculations based on IMPLAN

The total economic impact on the San Joaquin Valley can be broken by industry. Table 13 shows the results of this analysis. CFRS benefits paid and related spending impact is seen primarily in the health and social services, retail trade, manufacturing, and government sectors. These industrial sectors amount to more than 53% of the total output impact in the Valley's economy and for close to 46% of the total jobs supported.

**Table 13: Annual Economic Impact by Industry of CFRS Benefits Paid
To San Joaquin Valley Retirees**

Industry 3-digit NAICS	Output	Employment	Labor Income	Total Value Added
Ag, Forestry, Fish & Hunting	\$1,501,706	8	\$205,867	\$372,714
Mining	\$1,094,020	1	\$211,189	\$513,268
Utilities	\$1,642,775	2	\$242,532	\$734,370
Construction	\$522,288	3	\$180,712	\$185,500
Manufacturing	\$7,753,783	13	\$635,860	\$1,005,369
Wholesale Trade	\$4,185,999	20	\$1,163,503	\$2,072,766
Transportation & Warehousing	\$2,071,058	13	\$666,397	\$858,907
Retail trade	\$11,562,062	120	\$3,552,926	\$5,581,608
Information	\$2,405,056	7	\$397,018	\$749,742
Finance & insurance	\$6,749,969	26	\$1,433,355	\$2,766,281
Real estate & rental	\$4,831,476	22	\$601,292	\$2,386,466
Professional-scientific & tech services	\$2,840,986	19	\$904,506	\$1,076,712
Management of companies	\$707,450	4	\$200,712	\$258,667
Administrative & waste services	\$1,883,783	26	\$672,337	\$828,838
Educational services	\$830,555	13	\$290,812	\$326,312
Health & social services	\$13,408,155	116	\$5,348,825	\$6,172,742
Arts- entertainment & recreation	\$754,693	12	\$230,009	\$326,084
Accommodation & food services	\$5,208,711	76	\$1,269,116	\$1,838,923
Other services	\$3,324,230	54	\$1,060,307	\$1,294,890
Government	\$14,551,658	8	\$480,411	\$8,845,336
TOTAL	\$87,830,414	562	\$19,747,686	\$38,195,495

Source: Author's calculations based on IMPLAN

VII. The Relative Economic Impact of the ERS and the FPRS

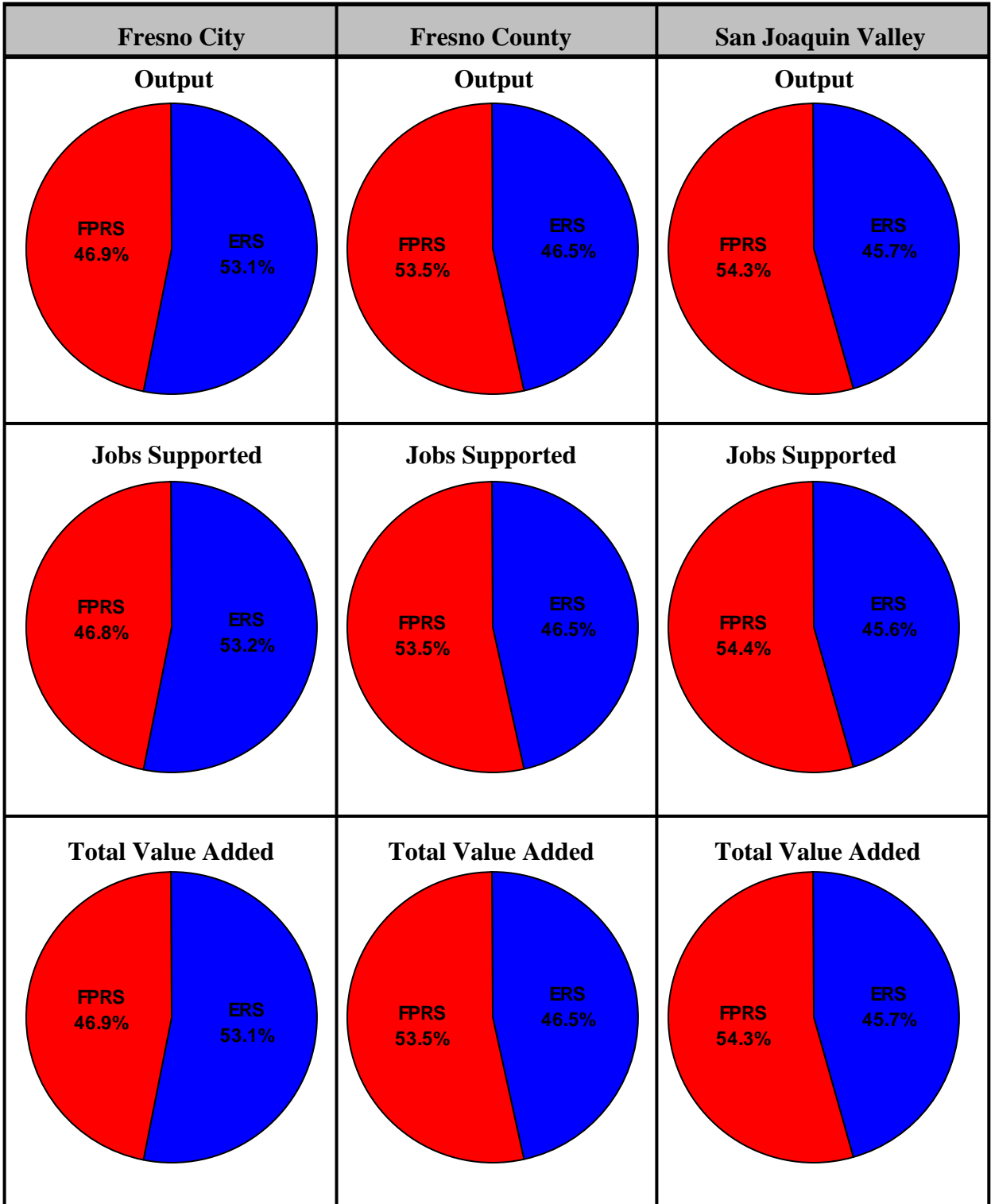
This section shows a brief summary of the economic impact of the ERS and FPRS. The objective is to provide some perspective of the relative magnitude of the economic impact that these two systems have on the regional economies under examination. Table 14 shows the geographical distribution of benefits payments to retirees in both systems in 2007. Close to 85% of ERS retirees are residents of the San Joaquin Valley which means that most of the total benefits paid -87.3%- stay within this region. In addition, within the San Joaquin Valley, Fresno County is home of almost 94% of ERS retirees, while the City of Fresno is home to more than 83% of ERS retirees in Fresno County. Similarly, close to 82% of FPRS retirees are residents of the San Joaquin Valley which means that most of the total benefits paid -83.7%- stay within this region. In addition, within the San Joaquin Valley, Fresno County is home of almost 90% of FPRS retirees, while the City of Fresno is home to more than 66% of FPRS retirees in Fresno County. The relative impact attributable to the benefits payments to ERS and FPRS retirees is shown in Figure 3, where the columns represent each of the impacted regions under examination and the rows represent impact categories: output, jobs supported and total value added.

Table 14: Geographical Distribution of Benefits Payments to ERS and FPRS Retirees

Region	Total Number of Receptients		Total Amount Paid	
	ERS	FPRS	ERS	FPRS
United States	1315	839	\$33,457,389	\$41,457,952
California	1208	753	\$31,166,390	\$37,702,102
Other U.S States	107	86	\$2,290,999	\$3,755,850
Canada	2	0	\$69,004	\$0
San Joaquin Valley	1116	684	\$29,205,564	\$34,712,574
Fresno County	1043	611	\$27,406,363	\$31,579,743
Kings County	6	2	\$132,870	\$58,911
Kern County	3	2	\$70,576	\$68,354
Madera County	50	46	\$1,252,555	\$2,263,694
Merced County	4	2	\$84,267	\$59,845
Stanislaus County	3	4	\$73,607	\$78,815
San Joaquin County	0	1	\$0	\$18,773
Tulare County	7	16	\$185,327	\$584,439
City of Fresno	867	403	\$22,932,480	\$20,283,523

SOURCE: Author's calculations based on CFRS data

Figure 3: Relative Economic Impact of the ERS and the FPRS



SOURCE: Author's calculations based on CFRS data and IMPLAN

It is clear that the economic impact of ERS is slightly larger in the City of Fresno than the impact of FPRS. In contrast, the impact of FPRS in Fresno County and in the San Joaquin Valley is slightly larger than the impact of ERS. These economic impact estimates are consistent with the following two facts. First, at the City level, the number of ERS recipients and benefits paid are larger than the same figures for the FPRS, which implies a larger economic impact in terms of output, jobs supported and value added. Second, at the Fresno County and San Joaquin Valley levels, although the number of FPRS recipients is smaller than ERS recipients, the total amount paid to FPRS is larger than the amount paid to ERS recipients. In other words, while the average benefit paid to an ERS retiree was \$26,276 in Fresno County and \$26,170 in the San Joaquin Valley, the average benefit paid to an FPRS retiree was \$51,685 in Fresno County and \$50,749 in the San Joaquin Valley. Therefore, it is expected that the economic impact of FPRS in Fresno County and the San Joaquin Valley is larger than the impact of ERS. For more details about the economic impact of both ERS and FPRS separately, check the accompanying reports produced in conjunction with this one.

About the Author

Antonio Avalos is Assistant Professor of Economics at California State University, Fresno since 2003, and Research Director of the Center for Economic Research and Education of Central California (CERECC) since 2006. He earned his Ph.D. in Economics from Oklahoma State University with specialization in Economic Development and International Economics. His areas of expertise also include Regional Economics and Latin American Economic Development. Professor Avalos has spent several years conducting research on workforce and regional economics issues. In 1998, he was appointed Herman Kahn Fellow at the Hudson Institute in Indianapolis, Indiana working for the Center for Workforce Development. Professor Avalos assisted the Center in several applied research studies integrating economic development and workforce development at the local and regional level.

Among the international experience of Dr. Avalos as a research economist, he was selected by a panel of international economists as a visiting scholar at the Andean Corporation of Development in Caracas, Venezuela in 2002, where he conducted applied research in international trade, economic development and labor markets in Latin American economies. Dr. Avalos also assisted the Andean Corporation of Development in a study about regional and international migration of the workforce. His contribution, "Migration and Regional Integration", was presented at an international conference sponsored by the UNESCO and SELA.

Currently, Professor Avalos is investigating the dynamics of the regional economy identifying the forces shaping the Central Valley's economy. His work includes analyzing the changes in work, the workplace, compensation and occupations in recent decades and developing a scenario for the Central Valley regional economy's future.

About the Center for Economic Research and Education of Central California

The Center for Economic Research and Education of Central California (CERECC) is an ancillary unit of the Department of Economics at the California State University, Fresno. The Center provides economic analysis for local business, community groups, and policymakers, and provides educational material to local educators. Recent activity of the Center has focused on analysis of the labor market in the central San Joaquin Valley, economic impact analysis, the creation of an index of economic indicators and business survey, and providing workshops for educators.



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