

**The Economic Impact of First 5 San Diego
on San Diego County, California**

Submitted to

First 5 Commission of San Diego and
Harder + Company Community Research, Inc.
3965 5th Avenue, Suite 420
San Diego, CA 92103

Submitted by

Abbas Grammy, Ph.D.
Professor of Economics
School of Business and Public Administration
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, CA 93311

Table of Contents

<u>Title</u>	<u>Page</u>
1. Executive Summary	4
2. Background Information	7
3. Essentials of Economic and Fiscal Impact Study	10
4. Industry Identification and Spending Allocation	13
5. Results of Economic and Fiscal Impact Study	15
5.1. Output Impact	15
5.2. Employment Impact	17
5.3. Value-Added Impact	18
5.4. Fiscal Impact	21
5.5. Impact Multipliers	22
6. Concluding Remarks	24
References	26
Appendix A	27

List of Illustrations

<u>Table</u>	<u>Page</u>
1. Results of Economic and Fiscal Impact Study	6
2. First 5 San Diego's Expenditure and Employment Data	13
3. Output Impact of First 5 San Diego	15
4. Major Beneficiaries of First 5 San Diego Spending	16
5. Employment Impact of First 5 San Diego	18
6. Distribution of First 5 San Diego's Total Value-Added	19
7. Spending Pattern of Household Labor Income	20
8. Value-Added Impact of First 5 San Diego	21
9. Fiscal Impact of First 5 San Diego	22
10. Impact Multiplier Effects of First 5 San Diego	23
11. Major Beneficiaries of First 5 San Diego Spending by Industry	27

1. Executive Summary

In this study, we will quantify the economic and fiscal impacts of the First 5 San Diego expenditures on the economy of San Diego County. In the 2007-2008 Fiscal Year, First 5 San Diego's expenditures totaled \$44.3 million, which was financed by \$37.2 million of Proposition 10 funds and \$7.1 of matching grants. To estimate the economic and fiscal impacts of these expenditures, we will focus on two issues: (1) additional expenditures on various First 5 San Diego programs and (2) additional sales taxes paid by San Diego County households on the purchase of tobacco products. These issues will be examined in terms of direct, indirect, and induced economic, employment, and fiscal effects. Applying San Diego County's regional input-output multipliers to the program's data, we estimate that First 5 San Diego exerts sizeable positive economic and fiscal impacts on the economy of San Diego County.

First 5 San Diego's *net output impact* totals \$12.3 million, including \$7.1 million of direct effect and \$5.3 million of indirect and induced effects. The major beneficiaries of this output impact are the industries of real estate and rental activity, wholesale trade businesses, food services and drinking establishments, and architectural and engineering companies.

In addition, First 5 San Diego operates with a *net employment impact* of 213 full-time equivalent (FTE) jobs, including 181 direct FTEs and 32 indirect and induced FTEs.

Total value-added consists of labor income, property income, and indirect business taxes. For First 5 San Diego, labor income accounts for 91 percent of its total value-added and property income and indirect business taxes take the remaining 8 percent. San Diego households spend nearly \$20 million of their labor income on various

consumer goods and services such as automobiles, grocery store purchases, mortgage loans payments, and insurance premiums.

First 5 San Diego creates a *net value-added impact* of \$5.8 million, including \$920,000 of direct effect, \$1.8 million of indirect effect, and \$2.9 million of induced effect. Likewise, First 5 San Diego operates with a *net fiscal impact* of \$5.6 million, where \$6.7 million of new tax revenues for the federal government are offset by \$1.1 million in subsidies paid by state and local governments.

Finally, we calculate an *output impact multiplier* of 1.73, which asserts that each dollar of direct spending creates 73¢ of indirect and induced spending. We also calculate an *employment impact multiplier* of 1.2, indicating that every 5 direct FTEs create 1 indirect and induced FTE. Moreover, the program operates with a *value-added impact multiplier* of 6.1, suggesting that each dollar directly paid in wages, profits, and taxes creates \$5.10 of additional income for the recipients of that payment.

Table 1 summarizes the economic and fiscal impact results of the First 5 San Diego program.

Table 1: Results of Economic and Fiscal Impact Study

Industry	Code	Direct	Indirect	Induced	Total
Output Impact:					
Nonresidential Construction	36	\$7,215,242	\$2,041,415	\$2,513,961	\$11,770,618
Offices of Doctors of Medicine and other Health Care Providers	394	\$11,505,744	\$3,156,103	\$4,768,663	\$19,430,510
Individual & Family Social Services	400	\$8,549,480	\$2,681,031	\$3,318,293	\$14,548,804
Elementary & Secondary Schools	12002	\$13,044,196	\$3,369,012	\$2,699,671	\$19,112,879
General Government	12003	\$3,971,906	\$988,205	\$1,193,598	\$6,153,709
Total		\$44,286,568	\$12,235,766	\$14,494,186	\$71,016,520
Less:					
Food & Beverage Stores	324	\$37,203,150	\$9,476,687	\$12,065,327	\$58,745,164
Net Output Impact		\$7,083,418	\$2,759,079	\$2,428,859	\$12,271,356
Employment Impact (FTE):					
Nonresidential Construction	36	56	9	13	78
Offices of Doctors of Medicine and other Health Care Providers	394	97	14	24	135
Individual & Family Social Services	400	150	12	17	179
Elementary & Secondary Schools	12002	98	14	24	136
General Government	12003	26	5	6	37
Total		427	54	84	565
Less:					
Food & Beverage Stores	324	246	64	42	352
Net Employment Impact		181	-10	42	213
Value Added Impact:					
Nonresidential Construction	36	\$3,723,454	\$1,203,331	\$1,518,704	\$6,445,489
Offices of Doctors of Medicine and other Health Care Providers	394	\$7,937,545	\$1,841,178	\$2,880,787	\$12,659,510
Individual & Family Social Services	400	\$5,211,871	\$1,618,068	\$2,004,608	\$8,834,547
Elementary & Secondary Schools	12002	\$7,951,905	\$2,468,735	\$3,058,490	\$13,479,130
General Government	12003	\$1,808,891	\$577,401	\$721,062	\$3,107,354
Total		\$26,633,666	\$7,708,713	\$10,183,651	\$44,526,030
Less:					
Food & Beverage Stores	324	\$25,714,588	\$5,948,418	\$7,288,762	\$38,951,768
Net Value-Added Impact		\$919,078	\$1,760,295	\$2,894,889	\$5,574,262
Fiscal Impact:					
		Federal Government	State & Local Governments		
Nonresidential Construction	36	\$6,589,108	\$3,399,496	\$9,988,604	
Offices of Doctors of Medicine and other Health Care Providers	394	\$2,050,905	\$981,731	\$3,032,636	
Individual & Family Social Services	400	\$1,488,865	\$696,350	\$2,185,215	
Elementary & Secondary Schools	12002	\$2,271,606	\$1,062,442	\$3,334,048	
General Government	12003	\$505,885	\$262,252	\$768,137	
Total		\$12,906,369	\$6,402,271	\$19,308,640	
Less:					
Food & Beverage Stores	324	\$6,236,590	\$7,495,403	\$13,731,993	
Net Fiscal Impact on Gov't		\$6,669,779	-\$1,093,132	\$5,576,647	

2. Background Information

California voters passed the California Children and Families Act (Proposition 10) on November 10, 1998. Proposition 10 levies a 50-cent tax on tobacco products. These revenues finance new programs that promote children's early development from prenatal to five years. Subsequently, the First 5 Commission of San Diego County (First 5 San Diego) was established with the vision that *every child in San Diego County will enter school ready to succeed*. San Diego County's portion of Proposition 10 tax revenues fund First 5 San Diego programs and services that meet local needs and priorities, as well as the Commission's goals.

First 5 San Diego's programs promote the health and well-being of young children during their most critical years of development, the prenatal stage through five years. These programs provide children with healthcare, developmental checkups and services, dental care, obesity prevention programs, quality childcare, early education and family support. First 5 San Diego provides San Diego's youngest children with the following programs and services:

Healthcare Access Initiative (HCA): This initiative enrolls eligible children ages 0 through 5 and pregnant women in health insurance programs such as Healthy Families, Medi-Cal and Access for Infants and Mothers (AIM). It helps families maintain their insurance and appropriately use medical care. HCA focuses on serving challenging and hard-to-reach households.

Healthy Development Services (HDS): This is a countywide comprehensive program whose primary goal is the early identification and treatment of health and

developmental delays that can negatively affect a child's ability to learn. HDS is a region-based network of providers, focuses on:

- Medical home visits for newborns of all first-time parents
- Ongoing home visits for at-risk families with newborns focusing on nutrition, breastfeeding, bonding and attachment, maternal depression and parenting practices
- Screening children for speech and language, hearing, vision, developmental and behavioral issues
- Connecting children with mild to moderate delays to services so that they enter school ready to succeed
- Education and support for families with children who have delays or special needs.

Oral Health (OHI): This initiative addresses a widespread, yet traditionally underfunded public health need. OHI funds oral health services and education within a network of 15 community clinics and 4 other programs. This comprehensive, countywide program includes screenings and examinations; fluoride sealant and varnishes; routine treatment and high level care such as root canals for young children; and screening, exams and routine treatment for pregnant women.

School Readiness: These quality programs take a whole-child approach to early learning, fostering children's physical, social, emotional and cognitive development. They are located in school districts in Chula Vista, El Cajon, Escondido, National City, Oceanside, San Diego, San Ysidro and Vista.

Preschool for All Demonstration Project (PFA): Preschool for All is a five-year model project that provides free high quality preschool to 4-year olds in Escondido, Lemon Grove, National City, San Ysidro, South Bay and Valley Center. Its goal is to help children acquire the skills they need to be successful when they enter kindergarten.

First 5 for Parents: This program seeks to strengthen parents' knowledge and encourage behavioral changes. The program focuses on developing more effective parenting skills, promoting children's early learning and early literacy development, and fostering healthy behavior with proper nutrition and exercise.

Comprehensive Approaches to Raising Educational Standards (CARES): This program provides education stipends to early child care professionals to complete college courses and improve the quality of local early care.

The Kit for New Parents: This program distributes the *Kit for New Parents*, -- parent educational materials that include DVDs, books, and resource guides on parenting and child development.

211 San Diego: 211 San Diego is a 24-hour hotline that connects people to community, health and human services, and disaster information. **It serves over 39,000 families of young children annually,** and answered 120,000 urgent calls from the public during the 2007 wildfires -- preventing emergency lines from being overloaded.

3. Essentials of Economic and Fiscal Impact Study

In this study, we will quantify the economic and fiscal impacts of First 5 San Diego on the economy of San Diego County. Economic and fiscal impacts of social welfare programs financed by additional sales taxes are contentious because they redirect funds from household expenditures to program outlays. The question to be addressed empirically is whether this “sin tax” policy creates *new* money in the local economy. On the one hand, additional tobacco sales taxes would hinder spending and employment by businesses that would have otherwise benefitted from such household spending, therefore creating negative economic impacts. On the other hand, additional tax revenues collected by the state to pay for new programs help create jobs and incomes, thus exerting positive economic impacts. Our task in this study is to determine if Proposition 10 generates a positive net impact on the economy of San Diego County.

In this study, we will analyze financial and employment data provided by First 5 San Diego staff to measure the economic and fiscal impacts of the program. We will then compute the economic and fiscal impacts of imposing an additional tobacco sales tax that reduces household spending. We will compute direct, indirect, and induced impacts of both tobacco sales tax collection and First 5 program spending with respect to industry output, employment, and value-added. In doing so, we will identify local businesses that are major beneficiaries of First 5 San Diego expenditures. We will also calculate the multiplier effects for output, employment, and value-added.

To measure these effects, we will utilize the Regional Input-Output Modeling

System multipliers for San Diego County¹ and will analyze the First 5 San Diego financial and employment data by IMPLAN Professional, a state-of-the-art computer software package.

To estimate the economic and fiscal impacts of these expenditures, we will focus on two issues: (1) additional expenditures on various First 5 San Diego programs and (2) additional sales taxes paid by San Diego County households on the purchase of tobacco products. These issues will be examined in terms of direct, indirect, and induced economic, employment, and fiscal effects.

The economic impact stems from the fact that each dollar spent in the economy adds more than one dollar of income. For example, program participants buying educational or health supplies from a local retail supplier create additional income for that business. This expenditure is the direct impact of that program's supplier. The retail supplier, in turn, re-spends that income in the form of supplies, wages, rents, and profits. In turn, recipients of the supplier's spending use their dollars to pay for purchases of goods and services, thus creating new income in the economy. These expenditures form the indirect and induced impacts of the initial spending, which are estimated by way of multipliers.

A multiplier represents a quantitative expression of the extent to which some initial, "exogenous" change is expected to generate additional effects through interdependencies associated with some assumed and/or empirically established, "endogenous" linkage system. While indirect effects refer to the inter-industry impacts of the spending, induced effects are the result of extending the tracing of indirect effects

¹ Purchased from Minnesota IMPLAN Group Inc. to conduct this impact analysis

through households (i.e., taking the additional direct and indirect effects into account, which are based on household spending).

Multipliers are predicated upon a domino theory of economic change. They translate the consequences of change in one variable upon others, taking account of sometimes complicated and circuitous linkages. Multipliers are aptly called estimators of the “ripple effect.” In more technical terms, they are numerical coefficients, which relate a change in (a component of aggregate) demand (or employment) to a consequent change in total income (or total employment). One important multiplier is an “ex-post” estimate of the “ripple effect” called the *impact multiplier*. It is calculated as the ratio of the total effect (i.e., the sum of direct, indirect, and induced effects) to its direct effect in order to measure the effect of the change on income (or employment) as a result of the initial “exogenous” change.

4. Industry Identification and Spending Allocation

In the 2007-2008 Fiscal Year, First 5 San Diego’s expenditures totaled \$44.3 million, which was financed by \$37.2 million of Proposition 10 funds and \$7.1 of matching grants. To measure economic and fiscal impacts of these expenditures, we asked the First 5 San Diego staff to identify several industries from the IMPLAN list of industries that received First 5 San Diego expenditures. Subsequently, we asked the staff members to break out total expenditure and employment data into these industries. Table 2 presents First 5 San Diego’s industry-specific expenditure and employment data.

Table 2: First 5 San Diego's Expenditure and Employment Data

Code	Industry	Expenditures	Employment (FTE)
36	Nonresidential Construction Contractors	\$7,215,242	-
394	Offices of Doctors of Medicine and other Health Care Providers	\$11,505,744	161
400	Individual and Family Social Services	\$8,549,480	140
12002	Elementary and Secondary Schools	\$13,044,196	94
12003	General Government	\$3,971,906	32
Total		\$44,286,567	427

Expenditures on *elementary and secondary schools* accounted for \$13.0 million (or 29.5 percent) of First 5 San Diego’s allocation. Likewise, *offices of doctors of medicine and other health care providers* benefitted from \$11.5 million (or 26.0 percent) of total spending. The spending share of *individual and family social services* amounted to \$8.5 million (or 19.3 percent). Similarly, *nonresidential construction contractors* received \$7.2 million (or 16.3 percent) of total spending of First 5 San Diego, and *general government* agencies were paid nearly \$4.0 million (or 9.0 percent).

Similarly, *offices of doctors of medicine and other health care providers* accounted for 161 FTEs (or 37.7 percent) of First 5 San Diego’s total employment. The

employment share of *individual and family social services* amounted to 140 FTEs (or 32.8 percent). Likewise, *elementary and secondary schools* operated with 94 FTEs (or 22.0 percent) of total employment and *general government* agencies used 32 FTEs (or 7.5 percent).

Next, we consider that the state's allocation of the First 5 San Diego budget is financed by additional tax revenues collected from sales of tobacco products. To measure the economic and fiscal impacts of \$37.2 million of additional tobacco tax, we assume that consumers purchase tobacco products from retail shops. Hence, we have selected the industry of *food and beverages stores*.²

² The IMPLAN software requires selection of a specific industry in order to conduct an impact analysis. We have selected this industry from the IMPLAN list because it seemed most applicable to our study.

5. Results of Economic and Fiscal Impact Study

5.1. Output Impact

The economic impact of First 5 San Diego is measured by its total industry output. It is defined as the value of production by an industry for a given year and measured by total expenditures on final goods and services. Alternatively, it is calculated as the sum of outlays on intermediate goods and value added to these products in various stages of production. Table 3 presents the output impact of First 5 San Diego in 2007 dollars.

Table 3: Output Impact of First 5 San Diego

Industry	Code	Direct	Indirect	Induced	Total
Nonresidential Construction Contractors	36	\$7,215,242	\$2,041,415	\$2,513,961	\$11,770,618
Offices of Doctors of Medicine and other health Care Providers	394	\$11,505,744	\$3,156,103	\$4,768,663	\$19,430,510
Individual & Family Social Services	400	\$8,549,480	\$2,681,031	\$3,318,293	\$14,548,804
Elementary & Secondary Schools	12002	\$13,044,196	\$3,369,012	\$2,699,671	\$19,112,879
General Government	12003	\$3,971,906	\$988,205	\$1,193,598	\$6,153,709
Total		\$44,286,568	\$12,235,766	\$14,494,186	\$71,016,520
Less:					
Food & Beverage Stores	324	\$37,203,150	\$9,476,687	\$12,065,327	\$58,745,164
Net Output Impact		\$7,083,418	\$2,759,079	\$2,428,859	\$12,271,356

The output impact of First 5 San Diego expenditures totals \$71 million, including \$44.3 million of direct effect, \$12.2 million of indirect effect, and \$14.5 million of induced effect. All industries contribute to this total output impact, including *offices of doctors of medicine and other health care providers* (\$19.4 million or 27.4 percent), *elementary and secondary schools* (\$19.1 million or 26.9 percent), *individual and family social services* (\$14.5 million or 20.5 percent), *nonresidential construction contractors* (\$11.8 million or 16.6 percent), and *general government* (\$6.2 million or 8.7 percent).

In contrast, the output impact of additional household spending on tobacco sales taxation totals \$58.7 million, including \$37.2 million of direct effect, \$9.5 million of indirect effect, and \$12.0 million of induced effect.

We find First 5 San Diego to exert a *net output effect* of nearly \$12.3 million on the economy of San Diego County. This *net output effect* is comprised of \$7.1 million of direct effect, \$2.8 million of indirect effect, and \$2.4 million of induced effect. By dividing the *net output effect* of \$12.3 million to its *net direct effect* of \$7.1 million, we calculate an *output impact multiplier* of 1.73, which asserts that each dollar of direct spending creates 73¢ of indirect and induced spending.

Many local businesses benefit from First 5 San Diego expenditures. Appendix A presents the beneficiaries of First 5 San Diego spending by industry. This list includes industries with indirect plus induced output impact in excess of \$100,000 in each of five spending categories of First 5 San Diego. Table 4 identifies four major beneficiaries of First 5 San Diego spending with sum of indirect and induced output impact in excess of \$900,000 in all five spending categories of First 5 San Diego.³

Table 4: Major Beneficiaries of First 5 San Diego Spending

Real Estate & Rental Activity	\$4,559,954
Wholesale Trade Businesses	\$1,840,813
Food Services and Drinking Establishments	\$1,099,178
Architectural & Engineering Companies	\$934,561

³ Note: In Table 4, the real estate and rental activity impact is the sum of those for real estate establishments (360) and imputed rental activity for owner-occupied dwellings (361). Effects of each of these industries are detailed in Appendix A.

By and large, the real estate industry is the largest beneficiary of First 5 San Diego spending, gaining nearly \$4.6 million of new output. Likewise, wholesale trade businesses generate more than \$1.8 million of output. Food services and drinking establishments add \$1.1 million of new production and architectural and engineering companies gain about \$935,000.

5.2. Employment Impact

The employment impact measures the total number of wage-and-salary employees and self-employed workers in the region. It includes both full-time and part-time workers measured in average annual number of jobs. In this study, we convert the employment impact of First 5 San Diego into full-time equivalent (FTE) jobs. As shown in Table 5, First 5 San Diego, which operates with a labor force of 427 FTEs, generates 54 indirect FTEs and 84 induced FTEs for a total employment impact of 565 FTEs.

All industries contribute to this total output impact including *individual and family social services* (179 FTEs or 31.7 percent), *elementary and secondary schools* (136 FTEs or 24.1 percent), *offices of doctors of medicine and other health care providers* (135 FTEs or 23.9 percent), *nonresidential construction contractors* (78 FTEs or 13.8 percent), and *general government* (37 FTEs or 6.5 percent).⁴

This employment gain is partly offset by the loss of jobs caused by additional tobacco sales taxation. We estimate that the *food and beverage stores* industry loses 246 direct FTEs, 64 indirect FTEs, and 42 induced FTEs for a total of 352 FTEs.

⁴ Although First 5 San Diego does not employ construction workers directly, the industry exerts positive employment impacts because contractors hire labor resources to complete First 5 San Diego construction projects.

We find First 5 San Diego to exert a *net employment effect* of 213 FTEs on the economy of San Diego County. This *net employment effect* is comprised of 181 direct FTEs, and 32 indirect and induced effects. By dividing the *net employment effect* of 231 FTEs to its *net direct effect* of 181 FTEs, we calculate an *employment impact multiplier* of 1.2, indicating that every 5 direct FTEs add 1 indirect and induced FTE.

Table 5: Employment Impact of First 5 San Diego

Industry	Code	Direct	Indirect	Induced	Total
Nonresidential Construction Contractors	36	56	9	13	78
Offices of Doctors of Medicine and other Health Care Providers	394	97	14	24	135
Individual & Family Social Services	400	150	12	17	179
Elementary & Secondary Schools	12002	98	14	24	136
General Government	12003	26	5	6	37
Total		427	54	84	565
Less:					
Food & Beverage Stores	324	246	64	42	352
Net Employment Impact		181	-10	42	213

5.3. Value-Added Impact

Total value-added is defined as the sum income payments by an industry to factors of production. Total value-added consists of three main components: labor income, property income, and indirect business taxes. Labor income consists of wages and salaries paid to hired workers and earnings of self-employed labor. Property income accounts for household earnings from interest, rent, royalties, dividends, and profit. Indirect business taxes are excise and sales taxes that households pay to businesses to be collected by the government.

As depicted in Table 6, First 5 San Diego’s expenditures create \$26.6 million in total value-added of which labor income accounts for \$24.5 million (or 92 percent),

property income takes \$1.9 million (or 7 percent), and indirect business taxes account for \$241,000 (or 1 percent).

Table 6: Distribution of First 5 San Diego’s Total Value-Added

Industry	Code	Total Value-Added	Labor Income	Property Income	Indirect Business Taxes
Nonresidential Construction Contractors	36	\$3,723,454	\$3,456,368	\$221,726	\$45,359
Offices of Doctors of Medicine and other Health Care providers	394	\$7,937,545	\$7,073,978	\$782,585	\$80,982
Individual & Family Social Services	400	\$5,211,871	\$4,873,723	\$306,070	\$32,078
Elementary & Secondary Schools	12002	\$7,937,545	\$7,435,984	\$466,979	\$48,942
General Government	12003	\$1,808,891	\$1,643,960	\$131,420	\$33,512
Total		\$26,619,306	\$24,484,013	\$1,908,780	\$240,873

To measure the pattern of household expenditures from this *new* labor income, we apply an *average propensity to consume* of 81.4 percent. Accordingly, San Diego households allocate \$19.9 million of their \$24.5 million of their labor income to purchases of goods and services. As show in Table 7, San Diego households allocate \$1.9 (or 9.4 percent) of their disposable income to automobile expenses; \$1.7 million (or 8.7 percent) to purchases from grocery stores; \$1.5 million (or 7.4 percent) to mortgage loan interest payments; \$1.4 million (or 7.2 percent) to insurance premiums (home, auto, health, life); \$1.2 million (or 6.3 percent) to eating out at restaurants; \$1.1 million (or 5.7 percent) to housing; \$1.1 million (5.5 percent) to clothing and apparel; \$1.1 million (or 5.4 percent) to entertainment and recreation; \$917,000 (or 4.6 percent) to home furnishing and appliances; \$658,000 (or 3.3 percent) to utilities (electricity and gas); \$618,000 (or 3.1 percent) to health-care; \$498,000 (or 2.5 percent) to communication (telephone, e-mail, etc.); and \$339,000 (or 1.7 percent) to education. They allocate the remaining \$5.8 million (or 29.2 percent) to expenditures on miscellaneous retail product and services.

Table 7: Spending Pattern of Household Labor Income

Labor Income	\$24,484,013
Disposable Labor Income	\$19,930,926
Automobiles	\$1,873,507
Grocery Items	\$1,733,991
Mortgage Loans (Interest only)	\$1,474,889
Insurance Premiums	\$1,435,027
Restaurants	\$1,255,648
Housing	\$1,136,063
Clothing & Apparel	\$1,096,201
Entertainment & Recreation	\$1,076,270
Home Furniture & Appliance	\$916,823
Electric & Gas Utilities	\$657,721
Health-care	\$617,859
Communication	\$498,273
Education	\$338,826
Miscellaneous Retail Products & Services	\$5,819,830

Next, we measure the value-added impact of First 5 San Diego expenditures.

According to the data presented in Table 8, the value-added impact of First 5 San Diego expenditures totals \$44.5 million, including \$26.6 million of direct effect, \$7.7 million of indirect effect, and \$10.2 million of induced effect. All industries contribute to this total value-added impact including *elementary and secondary schools* (\$13.5 million or 30.3 percent), *offices of doctors of medicine and other health care providers* (\$12.7 million or 28.4 percent), *individual and family social services* (\$8.8 million or 19.8 percent), *nonresidential construction contractors* (\$6.4 million or 14.5 percent), and *general government* (\$3.1 million or 7.0 percent).

In contrast, the value-added impact of additional household spending on tobacco sales taxation totals \$38.9 million, including \$25.7 million of direct effect, \$5.9 million of indirect effect, and \$7.3 million of induced effect.

We find the First 5 San Diego program to exert a *net value-added effect* of \$5.6 million on the economy of San Diego County. This *net value-added effect* is comprised

of \$920,000 of direct effect, \$1.7 million of indirect effect, and \$2.9 million of induced effect. By dividing the *net value-added effect* of \$5.6 million to its *net direct effect* of \$920,000, we calculate a *value-added impact multiplier* of 6.1, which asserts that each dollar of direct spending creates nearly \$5.10 of new labor income, property income, and indirect business taxes.

Table 8: Value-Added Impact of First 5 San Diego

Industry	Code	Direct	Indirect	Induced	Total
Nonresidential Construction Contractors	36	\$3,723,454	\$1,203,331	\$1,518,704	\$6,445,489
Offices of Doctors of Medicine and Other health Care Providers	394	\$7,937,545	\$1,841,178	\$2,880,787	\$12,659,510
Individual & Family Social Services	400	\$5,211,871	\$1,618,068	\$2,004,608	\$8,834,547
Elementary & Secondary Schools	12002	\$7,951,905	\$2,468,735	\$3,058,490	\$13,479,130
General Government	12003	\$1,808,891	\$577,401	\$721,062	\$3,107,354
Total		\$26,633,666	\$7,708,713	\$10,183,651	\$44,526,030
Less:					
Food & Beverage Stores	324	\$25,714,588	\$5,948,418	\$7,288,762	\$38,951,768
Net Value-Added Impact		\$919,078	\$1,760,295	\$2,894,889	\$5,574,262

5.4. Fiscal Impact

The fiscal impact takes into account the amount of new tax revenues of the federal government as well as state and local governments. These taxes are collected from various sources such as personal incomes, corporation profits, social insurance contributions, and motor vehicle licenses.

As depicted in Table 9, the fiscal impact of First 5 San Diego expenditures totals \$19.3 million, including \$12.9 million for the federal government and \$6.4 million for state and local governments.

All industries contribute to this total fiscal impact including *nonresidential construction contractors* (\$10.0 million or 51.7 percent), *elementary and secondary schools* (\$3.3 million or 17.3 percent), *offices of doctors of medicine and other health*

care providers (\$3.0 million or 15.7 percent), individual and family social services (\$2.2 million or 11.3 percent), and general government (\$768,000 or 4.0 percent).

In contrast, the fiscal impact of additional household spending on tobacco sales taxation amounts to \$13.7 million, including \$6.2 million for the federal government and \$7.5 million for state and local governments.

The *net tax impact* totals \$5.6 million, where \$6.7 million of federal government tax revenues are offset by \$1.1 million of subsidies paid by state and local governments.

Table 9: Fiscal Impact of First 5 San Diego

Industry	Code	Federal Government	State & Local Governments	Total
Nonresidential Construction Contractors	36	\$6,589,108	\$3,399,496	\$9,988,604
Offices of Doctors of Medicine and other health Care Providers	394	\$2,050,905	\$981,731	\$3,032,636
Individual & Family Social Services	400	\$1,488,865	\$696,350	\$2,185,215
Elementary & Secondary Schools	12002	\$2,271,606	\$1,062,442	\$3,334,048
General Government	12003	\$505,885	\$262,252	\$768,137
Total		\$12,906,369	\$6,402,271	\$19,308,640
Less:				
Food & Beverage Stores	324	\$6,236,590	\$7,495,403	\$13,731,993
Net Fiscal Impact		\$6,669,779	-\$1,093,132	\$5,576,647

5.5. Impact Multipliers

We define the *output impact multiplier* as the *net output effect* divided by the *net direct effect*. By dividing the *net output effect* of \$12.3 million to its *net direct effect* of \$7.1 million, we calculate an *output impact multiplier* of 1.73, which asserts that each dollar of direct spending creates 73¢ of indirect and induced output.

Likewise, we define the *employment impact multiplier* as the *net employment effect* divided by its *net direct effect*. By dividing the *net employment effect* of 213 FTEs to its *net direct effect* of 181 FTEs, we calculate an *employment impact multiplier* of 1.2,

indicating that every 5 direct FTEs add 1 indirect and induced FTE.

Similarly, when we divide the *net value-added effect* of \$5.6 million to its *net direct effect* of \$920,000, we calculate a *value-added impact multiplier* of 6.1, which asserts that each dollar of direct value-added creates nearly \$5.10 of new labor income, property income, and indirect business tax revenue.

Table 10: Impact Multiplier Effects of First 5 San Diego

Industry	Direct Impact	Total Impact	Impact Multiplier
Net Output Impact	\$12,271,356	\$7,083,418	1.73
Net Employment Impact	214 FTEs	182 FTEs	1.20
Net Value-Added Impact	\$5,574,262	\$919,078	6.10

Draft Version

6. Concluding Remarks

In this study, we have quantified the economic and fiscal impacts of First 5 San Diego on the economy of San Diego County. Our empirical results indicate that First 5 San Diego is making sizeable positive contributions to the economy of San Diego County in terms of output, employment, and income creation.

First 5 San Diego's *net output impact* totals \$12.3 million, including \$7.1 million of direct effect and \$5.3 million of indirect and induced effects. The major beneficiaries of this output impact are the industries of real estate and rental activity, wholesale trade businesses, food services and drinking establishments, and architectural and engineering companies. In addition, First 5 San Diego operates with a *net employment impact* of 213 FTEs including 181 direct FTEs and 32 indirect and induced FTEs.

Total value-added consists of labor income, property income, and indirect business taxes. For First 5 San Diego, labor income accounts for 91 percent of its total value-added and property income and indirect business taxes take the remaining 8 percent. San Diego households spend nearly \$20 million of their of their labor income on various consumer goods and services such as automobiles, grocery store purchases, mortgage loans payments, and insurance premiums.

First 5 San Diego creates a *net value-added impact* of \$5.8 million, including \$920,000 of direct effect, \$1.8 million of indirect effect, and \$2.9 million of induced effect. Likewise, First 5 San Diego operates with a *net fiscal impact* of \$5.6 million, where \$6.7 million of new tax revenues for the federal government are offset by \$1.1 million subsidies paid by state and local governments.

Finally, we calculate an *output impact multiplier* of 1.73, which asserts that each

dollar of direct spending creates 73¢ of indirect and induced spending. We also calculate an *employment impact multiplier* of 1.2, indicating that every 5 direct FTEs create 1 indirect and induced FTEs. Moreover, the program operates with a *value-added impact multiplier* of 6.1, suggesting that each dollar directly paid in wages, profits, and taxes creates \$5.10 of additional payments for the recipients of that payment.

Draft Version

References

First 5 San Diego, <http://www.first5sandiego.org>

IMPLAN Pro, Version 2.0, Social Accounting and Impact Analysis Software, Minnesota, IMPLAN Group, Inc.

Labor Market Information, California Employment Development Department, www.labormarketinfo.edd.ca.gov/

Regional Input-Output Modeling System (RIMS II), United States Department of Commerce

Draft Version

Appendix A

Table 11: Major Beneficiaries of First 5 San Diego Spending by Industry

36 Nonresidential Construction

Architectural and engineering companies	\$533,578
Wholesale trade businesses	\$337,061
Real estate establishments	\$207,852
Food services and drinking establishments	\$163,070
Offices of doctors of medicine and other health care providers	\$148,284
Monetary authorities and depository credit institutions	\$115,558
Legal services	\$114,992

394 Offices of Doctors of Medicine and other Health Care providers

Imputed rental activity for owner-occupied dwellings	\$615,909
Real estate and rental establishments	\$592,195
Wholesale trade businesses	\$479,486
Food services and drinking establishments	\$358,077
Securities, commodity contracts, and investments	\$308,975
Monetary authorities and depository credit institutions	\$201,603
Medical and diagnostic labs and outpatient services	\$185,654
Management, scientific, and technical consultants	\$179,614
Management of companies and enterprises	\$176,347
Insurance carriers	\$175,063
Telecommunications	\$171,340
Private hospitals	\$151,713
Employment services	\$117,505
Retail stores	\$113,662
Non-depository credit intermediation and related institutions	\$109,718
Office administration services	\$106,278

400 Individual and Family Social Services

Real estate establishments	\$713,428
Imputed rental activity for owner-occupied dwellings	\$428,553
Wholesale trade businesses	\$310,670
Food services and drinking establishments	\$228,857
Securities, commodity contracts, and investments	\$218,772
Insurance carriers	\$198,834
Offices of doctors of medicine and other health care providers	\$195,739
Management, scientific, and technical consultants	\$162,468
Telecommunications	\$148,401
Management of companies and enterprises	\$137,077
Monetary authorities and depository credit in	\$132,723
Legal services	\$117,636
Employment services	\$112,654
Private hospitals	\$103,705
Other state and local government enterprises	\$103,273
Office administration services	\$100,504

12002 Elementary and Secondary Schools

Real estate establishments	\$1,088,494
Imputed rental activity for owner-occupied dwellings	\$653,855
Wholesale trade businesses	\$473,999
Food services and drinking establishments	\$349,174
Securities, commodity contracts, and investments	\$333,787
Insurance carriers	\$303,367
Offices of doctors of medicine and other health care providers	\$298,644
Management, scientific, and technical consultants	\$247,882
Telecommunications	\$226,420
Management of companies and enterprises	\$209,142
Monetary authorities and depository credit institutions	\$202,500
Legal services	\$179,480
Employment services	\$171,880
Private hospitals	\$158,225
Other state and local government enterprises	\$157,567
Office administration services	\$153,342
Non-depository credit intermediation and related institutions	\$126,769
Retail stores	\$118,555
Services to buildings and dwellings	\$110,964
Electric power generation and transmission	\$106,283

12003 General Government

Wholesale trade businesses	\$239,597
Architectural and engineering companies	\$230,384
Imputed rental activity for owner-occupied dwellings	\$154,164
Real estate establishments	\$105,504