



An Analysis of Sales Taxes on Business Services in California

May 2019

Prepared for

CFCE
California Foundation
for Commerce & Education

Prepared by
Justin L. Adams, Ph.D.



ENCINA ADVISORS, LLC

CONTENTS

FIGURES.....	iii
TABLES.....	iii
GLOSSARY.....	v
SUMMARY – CALIFORNIA SALES TAXES ON BUSINESS SERVICES	vi
1. INTRODUCTION – CALIFORNIA SALES TAXES ON BUSINESS SERVICES	1
1.1 Purpose of the Report.....	2
1.2 Approach.....	3
1.3 Structure of the Report.....	4
1.4 Acknowledgements.....	4
2. TAXES CURRENTLY PAID ON BUSINESS SERVICES	5
2.1 Components of Business Services	5
2.2 Quantifying Taxes Paid by Business Services.....	8
2.3 Context for Taxes Paid by Business Services	11
3. SALES TAXES ON BUSINESS SERVICES AND CALIFORNIA’S BUDGET VOLATILITY	13
3.1 California’s Budget Volatility	13
3.2 The Volatility of Business Services.....	16
3.3 Estimating the Impact of a Business Services Sales Tax.....	18
3.4 Forecasting Business Services Sales Tax Revenue	23
3.5 Potential Alternatives to Business Services Sales Tax Revenue	25
4. SALES TAXES ON BUSINESS SERVICES AND THE ECONOMIC ENVIRONMENT	26
4.1 Inherent Problems with Sales Taxes on Business Services.....	26
4.2 Potential Harms Caused by Sales Taxes on Business Services.....	29
4.3 Impacts to the California Economy.....	32
5. CONCLUSION.....	39
SELECTED REFERENCES.....	40
APPENDIX A – Methodology for Calculating California’s Taxable Base for Business Services....	42
APPENDIX B – California’s Estimated Taxable Services Base for Business Services, 2018-19....	44
APPENDIX C – Intermediate Commodities Consumed by Industrial Sector	46

FIGURES

Figure S.1: General Fund Revenues with Estimated Sales Taxes on Services Included, 1997-98 to 2016-17 (in Billions).....	vii
Figure 1.1: Business Services and Other Industries by NAICS 2-Digit Sector	3
Figure 2.1: Components of Economic Activity in California.....	6
Figure 2.2: California Employees by Business Services Industrial Sector, 2017	7
Figure 3.1: General Fund Revenues from 1994-95 to 2018-19 (in Billions).....	14
Figure 3.2: General Fund Resources vs Expenditures, 1997-98 to 2016-17 (in Billions)	16
Figure 3.3: California Taxable Services Base by Industrial Sector, 2018-19	17
Figure 3.4: Average Annual Deviations from Compound Annual Growth Rate by Industrial Sector, 1997-98 to 2016-17.....	18
Figure 3.5: Four Scenarios of a Sales Tax on Business Services	19
Figure 3.6: General Fund Revenues with Estimated Sales Taxes on Services Included, 1997-98 to 2016-17 (in Billions).....	20
Figure 3.7: Volatility of Status Quo General Fund vs. General Fund with Sales Taxes on Business Services	21
Figure 3.8: Estimated Impact of a Sales Tax on Business Services on General Fund Volatility and Growth, 1997-98 to 2016-17	22
Figure 4.1: Source of Intermediate Commodities Consumed, by Industrial Sector.....	27
Figure 4.2: Uneven Playing Field for California Companies.....	28
Figure 4.3: California Business Services Companies with Fewer than 20 Employees and Annual Sales Greater than \$100,000	31

TABLES

Table 2.1: California Employees, Total Output and Value Added, 2017	7
Table 2.2: California Major Taxes and Licenses, 2017-18 (Estimated).....	9
Table 2.3: California Major Taxes and Licenses Paid by Business Services Industries, 2017-18 (in Billions)	11
Table 3.1: Capital Gains Revenue as a Percentage of General Fund Tax Revenue.....	15
Table 3.2: Estimated Impact of a Sales Tax on Business Services on General Fund Volatility and Growth, 1997-98 to 2016-17	21
Table 3.3: General Fund During the Great Recession: Four Scenarios vs. the Status Quo	23
Table 3.4: Forecasted General Fund Revenue and Sales Tax on Business Services Revenue, 2019-20 to 2024-25 (in Billions and with Percentage of General Fund).....	24
Table 4.1: Estimated Effective Tax Rates for California Business Services Firms from a 5 Percent Sales Tax on Business Services, by Sector	30
Table 4.2: Estimated Effective Tax Rates for California Business Services Firms from a 5 Percent Sales Tax on Business Services, by Sector	32
Table 4.3: Increase in Housing Costs for New Single-Family Housing in California from a Sales Tax on Business Services	34
Table 4.4: Increase in School Construction Costs in California from a Sales Tax on Business Services.....	35
Table 4.5: Increase in SB 1 Construction Costs in California from a Sales Tax on Business Services (in Millions).....	37

Table B.1: California’s Estimated Taxable Services Base for Business Services, 2018-19 (In Millions)..... 44
Table B.2: Industries Included Under Business Services 45
Table C.1: Intermediate Commodities Consumed by Industrial Sector, United States, 2017 (In Millions of Dollars)..... 46

GLOSSARY

AB	Assembly Bill
AD	Average Deviation
B2B	Business-to-Business
BSA	Budget Stabilization Account
CAGR	Compound Annual Growth Rate
CDE	California Department of Education
CDTFA	California Department of Tax and Fee Administration
COTCE	Commission on the 21 st Century Economy
DoF	California Department of Finance
ETT	Employment Training Tax
FTB	California Franchise Tax Board
FTE	Full-time Equivalent
GSP	Gross State Product
LLC	Limited Liability Company
NAICS	North American Industry Classification System
NAPCS	North American Product Classification System
OPTI	Other Property Type Income
PCE	Personal Consumption Expenditures
PIT	Personal Income Tax
SB	Senate Bill
SFEU	Special Fund for Economic Uncertainties
TOPI	Taxes on Products and Imports, Less Subsidies
UI	Unemployment Insurance

SUMMARY – CALIFORNIA SALES TAXES ON BUSINESS SERVICES

In February 2019, state Senator Robert Hertzberg introduced Senate Bill (SB) 522 which, if enacted into law, would impose sales and use taxes on a broad range of services in California. While the details of the bill are scant, SB 522 promises to fundamentally transform the state's tax landscape, with significant implications for consumers, businesses and the economy as a whole.

Since California established its sales and use tax in the early 1930s, retailers conducting business in the state have been required to remit sales taxes on all sales of physical goods and merchandise (tangible personal property) except for those sales specifically exempted by law (e.g., certain medical devices and certain groceries). Additionally, California buyers purchasing physical goods and merchandise from a business located outside of California have been required to remit use taxes on these purchases if the retailer did not collect California sales tax from the buyer. The current statewide sales and use tax rate is 7.25 percent, although most local jurisdictions in the state have added district taxes of up to 3 percent on top of this amount.

California's sales and use tax generally does not apply to services. These are transactions where no transfer of tangible personal property or intangible personal property (e.g., patents) takes place. The limited exceptions where the sales and use tax might apply are instances where a service is inseparable from a physical good,¹ or situations where a service is part of a bundled or mixed transaction.

The arguments made in support of taxing services are varied, but a few stand out: First, there has been an increase in the consumption of nontaxable services relative to the consumption of taxable goods, and this change has impacted the trend of sales and use taxes collected by the state. Second, the personal income tax has significantly overtaken the sales and use tax as the most important revenue source for the California state budget. And third, California's increased reliance on personal income taxes – a highly volatile revenue stream – has resulted in periods of unpredictable General Fund revenue and boom-and-bust budgeting.

Consequently, some have looked to applying the sales and use tax to services to help dampen the volatility in state revenue. While all of the attempts to date to expand the sales and use tax broadly to services have failed, some in and around Sacramento remain convinced that a sales and use tax on services represents an essential reform for California. In recent legislative proposals, the focus has turned to business services in particular.

In light of SB 522 and continuing efforts to impose sales and use taxes on services, the question for policymakers is, Will taxing services – business services, in particular – actually solve California's budget volatility problems? Proponents believe that it will, but their support for a sales tax on services tends to be based on a handful of untested assertions. The three major assertions that proponents make are the following:

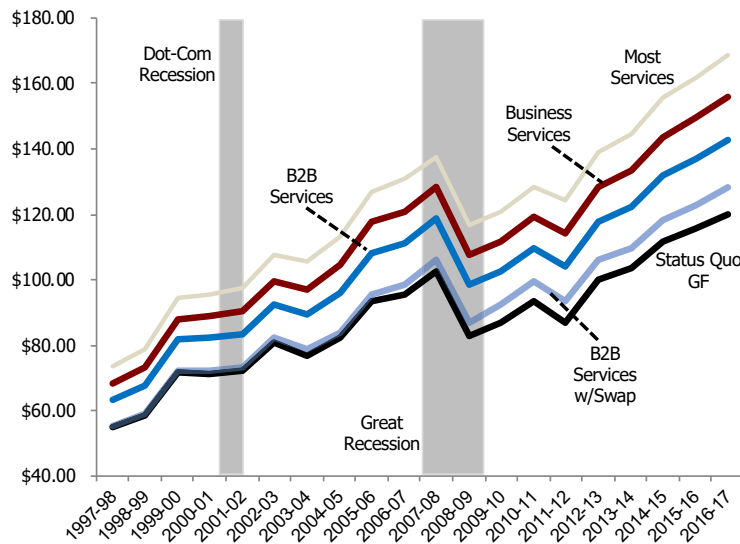
- Business services in California are untaxed economic activity, so taxing these services would promote fairness;
- Sales and use taxes on business services would stabilize California's government revenue; and
- Taxing business services would not harm California's economic environment.

¹ An example where a service is inseparable from a physical good is the taxable sale of machinery that the seller must calibrate as a condition of the sale. Here, the calibration fee is taxable.

This report tests these three assertions quantitatively. It uses the most current data from the U.S. Bureau of Economic Analysis, the U.S. Census Bureau, the California Department of Finance, the California Legislative Analyst's Office and IMPLAN (a leading provider of economic impact data) to quantify the potential impacts to California from imposing sales and use taxes on business services. It does so by compiling the corporation, sales and personal income taxes that California firms and their owners already pay today; estimating the revenue stream that a sales and use tax on business services might produce and analyzing the effect of this stream on government revenues; and illustrating the impact of such a tax on individual industries and communities in California. The purpose of the report is to provide policymakers quantitative data that will help them make an informed decision on the sensibility of imposing a sales and use tax on business services.

Our analysis found evidence that contradicted advocates' assertions. First, we estimated that business services industries currently are responsible for approximately \$22.2 billion in taxes to the State of California each year. After controlling for "sin taxes," this figure exceeds the taxes paid by other industries (\$21.9 billion). Given that business services industries represent 35.1 percent of California's Gross State Product (GSP), these taxes reflect an elevated payment relative to their contribution to the state's economy.

Figure S.1: General Fund Revenues with Estimated Sales Taxes on Services Included, 1997-98 to 2016-17 (in Billions)



Sources: California DoF, U.S. Bureau of Economic Analysis, Encina Advisors

Second, we found that a sales tax on business services would not significantly reduce General Fund volatility, based on an analysis of the 1997-98 to 2016-17 period and forward projections. Figure S.1 above shows four hypothetical scenarios of services taxes against the status quo General Fund (GF), based on recent proposals. For the Business Services scenario in particular, the reduction in volatility was only 18 percent, even if one assumes that economic activity is not depressed by the tax. The primary reason that a sales tax on business services would not significantly reduce General Fund volatility is that

even with the additional revenue, the General Fund still would rely heavily on the highly volatile Personal Income Tax (PIT).

Third, we found that a sales tax on business services creates a number of problems for the California economy, the most significant of which is compounded cost increases caused by pyramiding. Pyramiding is where the same services are taxed multiple times as they move through production to final retail sale. For example, consider a California architect that provides design services to a client. Architects regularly subcontract with engineering firms for specialized services, so the California architect would be required to pay sales taxes on the engineering services it utilized to meet the client's needs. The client would then pay sales taxes on the package of design services it received from the architect, which includes the engineering services as a component. Thus, the engineering services would be taxed at multiple points in the process and inflate the cost of services throughout. We calculated that pyramiding could transform a 5 percent sales tax on business services to an effective tax rate of 6.1 percent to 8.1 percent.

Through pyramiding, a sales tax on business services creates an uneven playing field for California companies. It also represents a tax on labor and causes significant implementation costs. These problems put California companies at a competitive disadvantage, place a burden on small businesses in particular, and result in higher costs for consumers.

Importantly, we discovered that a sales tax on business services would result in higher costs and unintended consequences for consumers, workers and businesses even if they were not intended targets of the tax. For example, our calculations indicate that a 5 percent sales tax on business services would increase the cost of child care by 1.63 percent, despite it being exempt from the tax. We also found:

- **Residential Housing Construction.** A 5 percent sales tax on business services would add more than \$16,500 to the price of a new home, given the variety of industries that support residential housing construction that would be taxed. This 3 percent price increase would make housing even more unaffordable in the state;
- **School Construction and Rehabilitation.** A 5 percent sales tax on business services would increase annual facilities construction and modernization costs by \$17 million in 2019-20 for state and local governments. This represents a cost increase of 2.3 percent, even though the tax would be designed to target businesses rather than schools. More importantly, it means that over 10 years, potentially \$170 million of needed school upgrades would not get completed absent additional funding;
- **SB 1 and Transportation Infrastructure.** A 5 percent sales tax on business services would increase annual costs for SB 1 funded activities by \$149 million in 2019-20 for state and local governments, or a cost increase of 3.2 percent. Consequently, over 10 years, a sales tax on business services could potentially prevent \$1.5 billion of transportation-related projects from being completed; and
- **Small Business.** Relles Florist, a Sacramento institution located in the heart of Midtown, is a small retailer that provides arrangements of fresh-cut flowers to its regional customers. A 5 percent sales tax on business services would increase Relles Florist's business and operating expenses by nearly \$21,000 a year, despite being in an industry that provides relatively few services. The 1.3 percent increase to the company's total expenses would affect its competitiveness in an industry with tight margins.

If policymakers are truly interested in reducing budget volatility in the state, other alternatives might be more apt. These include making California's existing sales tax system on goods more efficient, revisiting the structure of the state's personal income tax, and exploring a sales tax on personal services rather than business services. This report does not recommend any of these alternatives, rather it just notes that they likely would be more effective and less damaging.

1. INTRODUCTION – CALIFORNIA SALES TAXES ON BUSINESS SERVICES

In February 2019, state Senator Robert Hertzberg introduced Senate Bill (SB) 522 which, if enacted into law, would impose sales and use taxes on a broad range of services in California. While the details of the bill are scant, SB 522 promises to fundamentally transform the state's tax landscape, with significant implications for consumers, businesses and the economy as a whole.²

Since California established its sales and use tax in the early 1930s, retailers conducting business in the state have been required to remit sales taxes on all sales of physical goods and merchandise (tangible personal property) except for those sales specifically exempted by law (e.g., certain medical devices and certain groceries). Additionally, California buyers purchasing physical goods and merchandise from a business located outside of California have been required to remit use taxes on these purchases if the retailer did not collect California sales tax from the buyer.³

California's sales and use tax generally does not apply to services. These are transactions where no transfer of tangible personal property or intangible personal property (e.g., patents) takes place. The limited exceptions where the sales and use tax might apply are instances where a service is inseparable from a physical good,⁴ or situations where a service is part of a bundled or mixed transaction.

However, policymakers have given increasing attention over the past two decades to expanding the sales and use tax to cover services. The California Commission on Tax Policy in the New Economy (2003), for instance, recommended that the state broaden the sales tax base to include selected services while lowering the tax rate to retain revenue neutrality, and that the state eliminate selected sales and use tax exemptions or exclusions. The Commission on the 21st Century Economy (COTCE, 2009) contemplated sales taxes on services as a potential option for overhauling California's tax system.⁵ And the Think Long Committee recommended that a new sales tax on services be created and applied to all business and consumer services other than health care and educational services (Nicolas Berggruen Institute, 2011).

With this increased attention have come multiple legislative efforts to impose the sales and use tax on services. Assembly Member Joe Coto introduced Assembly Bill (AB) 9 in the 2005-06 session that would have extended the state sales tax to specified services such as accounting, legal and engineering services. Assembly Member Alyson Huber introduced AB 1963 in February 2012 which would have required the Legislative Analyst's Office to analyze how a sales tax on services would impact the state's revenue volatility. And Senator Hertzberg introduced SB 8 in December 2014, SB 1445 in February 2016, and SB 993 in February 2018, all of which would have imposed sales taxes on a broad range of services in the state.

The arguments made in support of taxing services are varied, but three drivers – all relating to budget volatility – stand out: First, the California economy has undergone a significant transformation since the establishment of the sales and use tax. Specifically, there has been an increase in the consumption of nontaxable services relative to the consumption of taxable goods. This change to a services-oriented economy effectively has reduced the proportion of personal income spent on taxable goods, which in turn has affected the trend of sales and use taxes collected by the state.

² The text of SB 522 can be accessed here:

http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB522

³ The current statewide sales and use tax rate is 7.25 percent, although most local jurisdictions in the state have added district taxes of up to 3 percent on top of this amount.

⁴ An example where a service is inseparable from a physical good is the taxable sale of machinery that the seller must calibrate as a condition of the sale. Here, the calibration fee is taxable.

⁵ The COTCE ultimately decided against recommending a sales tax on services.

Second, the sales and use tax has become a less prominent revenue source for the California state budget over time. This is partly due to the economic transformation previously mentioned, but it is also because of policy choices made in the state that prioritize personal income taxes. The California Department of Finance notes that for the fiscal year 1975-76 state budget, for example, sales and use taxes comprised the largest share of General Fund revenue at 40 percent. By contrast, for the 2018-19 state budget sales and use taxes made up only about 19 percent of General Fund revenue. Personal income taxes comprised the largest share at 70 percent (California Governor's Office, January 10, 2018).

And third, California's increased reliance on personal income taxes has resulted in periods of unpredictable General Fund revenue and boom-and-bust budgeting. Personal income taxes are a highly volatile revenue stream, driven in part by capital gains taxes on high-income individuals (California Legislative Analyst's Office, September 2017). Consequently, some have looked to applying the sales and use tax to services to help dampen the volatility in state revenue.

All of the previous attempts to expand the sales and use tax broadly to services have failed, yet some in and around Sacramento, including Senator Hertzberg, remain convinced that a sales and use tax on services represents an essential reform for California. Lately the focus has turned to business services in particular. George Skelton of the Los Angeles Times, for example, recently stated that "California's outdated state tax system... needs to be fixed by lowering income tax rates and extending the sales tax to services that are mainly used by businesses and the wealthy, such as legal (January 7, 2019)." While the conviction remains strong, few if any have actually analyzed whether a sales and use tax on business services would actually solve California's budget volatility problems, and at what cost.

1.1 Purpose of the Report

Senator Hertzberg has not yet revealed the details of SB 522. However, if it builds off his most recent legislation on the topic, SB 993, it will target business services specifically. In light of SB 522 and continuing efforts to impose sales and use taxes on services, the question for policymakers is, Will taxing services – business services, in particular – actually solve California's budget volatility problems? Proponents believe that it will, but their support for a sales tax on services tends to be based on a handful of untested assertions. The three major assertions, both explicit and implicit, that proponents make are as follows:⁶

- Business services in California are untaxed economic activity, so taxing these services would promote fairness;
- Sales and use taxes on business services would stabilize California's government revenue; and
- Taxing business services would not harm California's economic environment.

This report tests these three assertions quantitatively. It uses the most current data from the U.S. Bureau of Economic Analysis, the U.S. Census Bureau, the California Department of Finance, the California Legislative Analyst's Office and IMPLAN to quantify the potential impacts to California from imposing sales and use taxes on business services.⁷ It does so by compiling the corporation, sales and personal income

⁶ In categorizing SB 522 as an "urgency statute" under Article IV of the California Constitution, Senator Hertzberg in fact makes a fourth assertion. He states that it is necessary for this bill to take effect immediately "to prevent California's economy from another recession." He does not explain this counterintuitive notion that a tax increase on ordinary services could prevent a recession, however, and we do not address this point further.

⁷ IMPLAN is an input-output model that is widely used for economic impact analysis.

taxes that California firms and their owners already pay today; estimating the revenue stream that a sales and use tax on business services might produce and analyzing the effect of this stream on government revenues; and illustrating the impact of such a tax on individual industries and communities in California. The purpose of the report is to provide policymakers quantitative data that will help them make an informed decision on the sensibility of imposing a sales and use tax on business services.

1.2 Approach

There is no formal definition of what services comprise *business services* per se. In the context of SB 993 – the most recent bill involving sales taxes on services in California – services appear to be defined by who consumes them. In that bill, business services are those services that are mostly consumed by businesses, while personal services are those that are mostly consumed by individuals.

However, economic activity in the United States generally is categorized according to production rather than consumption. The federal government primarily uses the North American Industry Classification System (NAICS) for this purpose. So, for example, the legal services industry (NAICS 5411) includes offices of lawyers and title abstract and settle offices, but there is no distinction between who consumes this activity.

Figure 1.1: Business Services and Other Industries by NAICS 2-Digit Sector

<ul style="list-style-type: none"> ▪ 11 – Agriculture, Forestry, Fishing and Hunting* ▪ 21 – Mining, Quarrying, and Oil and Gas Extraction* ▪ 23 – Construction ▪ 44-45 – Retail Trade* ▪ 48-49 – Transportation and Warehousing ▪ 51 – Information ▪ 52 – Finance and Insurance ▪ 53 – Real Estate and Rental and Leasing ▪ 54 – Professional, Scientific, and Technical Services ▪ 56 -- Administrative and Support and Waste Management and Remediation Services ▪ 62 – Health Care and Social Assistance* ▪ 72 – Accommodation and Food Services* 	<ul style="list-style-type: none"> ▪ 11 – Agriculture, Forestry, Fishing and Hunting ▪ 21 – Mining, Quarrying, and Oil and Gas Extraction ▪ 22 – Utilities ▪ 31-33 – Manufacturing ▪ 42 – Wholesale Trade ▪ 44-45 – Retail Trade ▪ 55 – Management of Companies and Enterprises ▪ 61 – Educational Services ▪ 62 – Health Care and Social Assistance ▪ 71 – Arts, Entertainment and Recreation ▪ 72 – Accommodation and Food Services ▪ 81 – Other Services (except Public Administration)
Business Services	Other Industries

Source: Encina Advisors

* Only a few industries in these sectors are considered business services.

Consequently, for this report we base our definition of business services on the service industries identified by the California State Board of Equalization (BOE, April 14, 2015) and by SB 993. The BOE in 2015 compiled a list of all service industries that were untaxed in California at the time. Using this list as a starting point, SB 993 explicitly exempted specific service industries from its proposed sales tax,

effectively defining business services through a process of elimination.⁸ Exempted industries included health care services, education services, child care, rent, interest, and services provided by very small businesses. Figure 1.1 above lists the business services industries by NAICS 2-digit sector, as well as all other industries excluded from the business services definition. Appendix A in this report describes our methodology for identifying business services and for estimating the size of California’s taxable services base for business services. Appendix B in this report presents that taxable services base for 2018-19.

Additionally, SB 993 would have imposed a use tax as well as a sales tax on services, and these tax rates would have been identical. For simplicity, we refer to the combined sales and use tax as just the “sales tax” for the remainder of this report.

1.3 Structure of the Report

The next section provides high-level background on the California industries that provide business services and estimates the taxes they pay. Section 3 analyzes the revenue stream that a sales tax on business services might produce and how it impacts the volatility of California’s General Fund. Section 4 discusses the problems inherent with a sales tax on business services and some of the harms to California communities that can be expected. And Section 5 describes the report’s conclusions.

1.4 Acknowledgements

Encina Advisors conducted this research and analysis with the support of the California Foundation for Commerce and Education. We would like to thank Loren Kaye for providing insight and substantive comments on the report. Any errors remain the responsibility of the authors, however.

California Foundation for Commerce and Education

The California Foundation for Commerce and Education is a nonprofit (501(c)(3)) organization that serves as a “think tank” for the California business community. The Foundation is dedicated to preserving and strengthening the California business climate and private enterprise through accurate, impartial and objective research and analysis of public policy issues of interest to the California business and public policy communities. Affiliated with the California Chamber of Commerce, the Foundation is strictly non-partisan and takes no positions on pending legislation, ballot measures or other policy proposals.

⁸ The text of SB 993 can be accessed here:
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB993

2. TAXES CURRENTLY PAID ON BUSINESS SERVICES

This section addresses the common assertion by advocates of a sales tax on business services that business services in California are untaxed economic activity, with the implication being that taxing these services promotes fairness. This section begins by first describing the components of business services to better understand the inputs that support this economic activity. It then quantifies the taxes currently paid to state government by business services. Finally, it provides some context for the size of the taxes that are currently paid.

2.1 Components of Business Services

We used IMPLAN to help understand the economic activities involved with business services. IMPLAN is an input-output model that can quantify the inter-relationships between industries within a locality, state, region or the United States as a whole. The IMPLAN model is derived from data published by the U.S. Bureau of Economic Analysis, the U.S. Census Bureau and other sources. We used IMPLAN's California data for 2017, which is the most recent data available.

We developed a list of business services industries in IMPLAN based on the service industries identified by the California State Board of Equalization (BOE, April 14, 2015) and by SB 993.⁹ (This list is contained in Appendix B.) The list is a close approximation, given that IMPLAN and the BOE/SB 993 operate at different levels of granularity: the BOE/SB 993 list contains NAICS service industries at the 5-digit and 6-digit level of specificity, while IMPLAN contains NAICS service industries at the 3-digit and 4-digit level of specificity, which are rollups of the more detailed industries. That said, for most services IMPLAN is well-aligned with BOE/SB 993 and provides useful insights.

We used IMPLAN to analyze the components of economic activity for the set of all business services and for the set of all other industries. Generally, there are five broad components to an industry's (or a firm's) activities:

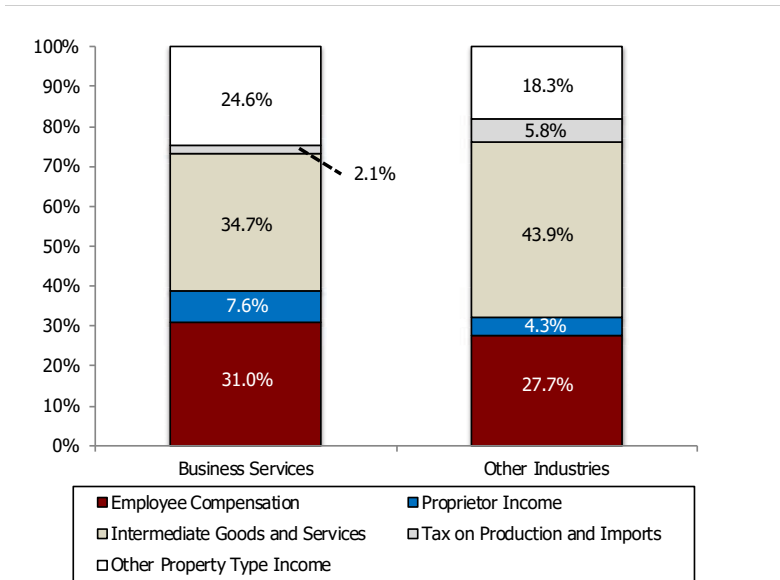
- *Employee compensation.* Employee Compensation is the total payroll cost of the employee paid by the employer. This includes wages and salaries, all benefits (e.g., health, retirement) and payroll taxes (both sides of Social Security, unemployment taxes, etc.);
- *Intermediate expenditures on goods and services.* This component contains purchases of goods and services used in the production process to generate final goods and services;
- *Taxes on production and imports, less subsidies (TOPI).* This component includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments. It excludes most nontax payments;
- *Proprietor income.* This component contains current-production income of sole proprietorships, partnerships, and tax-exempt cooperatives. It excludes dividends, monetary interest received by nonfinancial business, and rental income received by persons not primarily engaged in the real estate business; and

⁹ IMPLAN has 536 industry "sectors" in its model. In this report, we refer to IMPLAN's sectors as industries to distinguish them from the NAICS 2-digit sectors, which are agglomerations of individual industries.

- *Other property type income (OPTI)*. OPTI comprises gross operating surplus minus proprietor income. It includes the consumption of fixed capital, corporate profits, and business current transfer payments.

Together, the five components combine to form an industry’s (or a firm’s) total output. These components minus intermediate expenditures on goods and services represent an industry’s (or a firm’s) value added, which is the basis for measuring GSP.

Figure 2.1: Components of Economic Activity in California



Source: IMPLAN, California Data for 2017

Figure 2.1 above captures the relative value of the five components of economic activity for the set of all business services and for the set of all other private industries in California. It shows that 31.0 percent of the total output of business services went to employee compensation in 2017, and 7.6 percent went to proprietor income. (Proprietor income includes income to self-employed business owners.) This compares to only 27.7 percent for employee compensation and 4.3 percent for proprietor income for all other private industries. This disparity should not be surprising given that service industries are labor intensive.

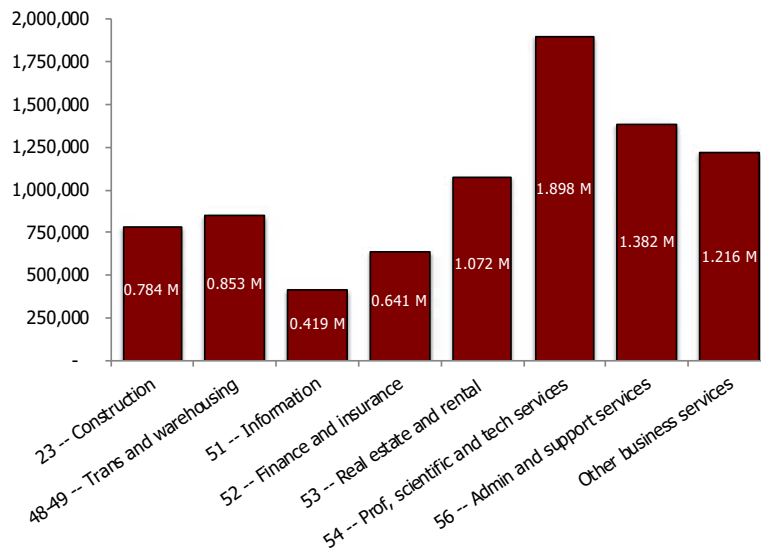
Figure 2.1 shows that 34.7 percent of the total output of business services went to expenditures on intermediate goods and services. This substantial amount reflects the fact that service industries rely heavily on other service industries in their day-to-day activities. A financial services firm, for example, requires information technology, accounting, legal, and janitorial services, to name a few, in the course of its business. For all other California industries, the amount was 43.9 percent, likely reflecting more expenditures on goods than services. This is suggested by the 2.1 percent of total output of business services going to taxes on production and imports compared to the 5.8 percent for all other industries. The remaining amount, 24.6 percent for business services and 18.3 percent for all other industries, went to corporate profits and the consumption of fixed capital.

Table 2.1: California Employees, Total Output and Value Added, 2017

Statistic	Business Services	Other Industries
Full-time Equivalent Employees (FTEs)	8,265,480 (44.0%)	10,515,815 (56.0%)
Total Output (in Millions)	\$1,650,609 (40.7%)	\$2,406,704 (59.3%)
Value Added (in Millions)	\$572,212 (35.1%)	\$1,056,368 (64.9%)

Source: IMPLAN

Figure 2.2: California Employees by Business Services Industrial Sector, 2017



Source: IMPLAN

Notes: "Other business services" is comprised of the following sectors: 11 – Agriculture, forestry, fishing, and hunting; 21 – Mining, quarrying, and oil and gas extraction; 44-45 – Retail trade; 62 – Health care and social assistance; and 72 – Accommodation and food services

The labor-intensive nature of business service industries is indicated above in Table 2.1, which describes the number of employees, total output and value added across all business services industries and across all other industries. Just over 8.2 million full-time equivalent employees (FTEs) worked in California business services industries in 2017, or roughly 44 percent of the state’s total. This proportion of total employment is high when compared against the total output and the value added of business services industries. In 2017, business service industries were responsible for \$1.7 trillion in total output and \$572 billion in value added, representing 40.7 percent and 35.1 percent of the totals, respectively.

Figure 2.2 above illustrates how this employment is allocated across business services industries. Figure 2.2 aggregates business services industries according to their NAICS 2-digit sector and shows total employment by sector. Professional, scientific, and technical services had the largest number of FTEs in 2017 at nearly 1.9 million. This represents roughly 23 percent of total employment in business services and 10 percent of total employment statewide. Administrative and support services and real estate and rental and leasing were next at 1.4 million and 1.1 million, respectively. Information was one of the smaller sectors by employment at about 419,000.

2.2 Quantifying Taxes Paid by Business Services

Businesses in California pay a variety of taxes, license fees, and regulatory fees to federal, state and local governments. To quantify the taxes paid on business services, we focused on payments to state government. This is appropriate given that this report addresses a potential state sales tax. We also focused on major taxes and licenses in California, as determined by the California Department of Finance (DoF). Because tabulating precise figures would have required access to thousands of company tax returns, we instead used data from DoF and IMPLAN to estimate state tax payments.

In addition to the state sales and use tax, major taxes and licenses in California include the following:

- *Personal Income Tax.* The Personal Income Tax (PIT), the state's largest revenue source, is paid by individuals or households based primarily on their wages and salaries, but also on other sources of income. Businesses do not pay personal income taxes per se – income from pass-through entities such as sole proprietorships, partnerships and S corporations is addressed through their owners' personal income taxes – however, employers are required to pay two state payroll taxes for their employees, specifically Unemployment Insurance (UI) and the Employment Training Tax (ETT).
- *Corporation Tax.* Traditional corporations and limited liability companies (LLCs) that elect to be treated as corporations are subject to a state income tax of 8.84 percent of their net income derived from business activity in California;
- *Insurance Tax.* Most insurance policies written in California are subject to a gross premiums tax of 2.35 percent. This tax takes the place of all other state and local taxes on insurance companies except those on real property and motor vehicles;
- *Alcoholic Beverage Taxes.* In addition to the sales tax paid by retail purchasers, California levies an excise tax on distributors of beer, wine, and distilled spirits;
- *Cigarette Taxes.* California levies an excise tax on cigarettes, tobacco products, and electronic cigarettes;
- *Cannabis Excise Taxes.* Proposition 64, the Adult Use of Marijuana Act, levies excise taxes on the cultivation and retail sale of both recreational and medical cannabis; and
- *Motor Vehicle Fees and Fuel Taxes.* Motor vehicle fees and taxes consist of vehicle license, registration, weight, driver license, and other charges related to vehicle operation. The motor vehicle fuel tax, diesel fuel tax, and use fuel tax are the major sources of funds for maintaining, replacing, and constructing state highway and transportation facilities.

Table 2.2: California Major Taxes and Licenses, 2017-18 (Estimated)

Major Taxes and Licenses	General Fund (in Thousands)	Special Funds (in Thousands)	Total (in Thousands)	Primarily Funded By
4110200-Excise Tax - Beer and Wine	\$172,779	-	\$172,779	Business
4110250-Excise Tax - Spirits	\$197,970	-	\$197,970	Business
4110300-Cannabis Excise and Cultivation Tax	-	\$185,064	\$185,064	Individuals
4110400-Cigarette Tax	\$66,537	\$2,051,071	\$2,117,608	Individuals
4110800-Corporation Tax	\$11,246,019	-	\$11,246,019	Business
4113000-Identification Card Fees	-	\$32,985	\$32,985	Individuals
4113400-Insurance Gross Premiums Tax	\$2,513,935	-	\$2,513,935	Business
4113600-Jet Fuel Tax	-	\$3,119	\$3,119	Business
4113800-Lien Sale Application Fees	-	\$1,109	\$1,109	Individuals
4114000-Mobilehome In-Lieu Tax	\$414	\$1,888	\$2,302	Individuals
4115000-Motor Vehicles - Driver's License Fees	-	\$290,318	\$290,318	Individuals
4115100-Motor Vehicles - Fuel Tax (Diesel)	-	\$991,908	\$991,908	Business
4115200-Motor Vehicles - Fuel Tax (Gasoline)	-	\$5,910,527	\$5,910,527	Individuals
4115300-Motor Vehicles - License (In-Lieu) Fees	-	\$2,768,553	\$2,768,553	Individuals
4115400-Motor Vehicles - Registration Fees	-	\$4,306,167	\$4,306,167	Individuals
4115450-Transportation Improvement Fee	-	\$737,000	\$737,000	Individuals
4115600-Motor Vehicles - Other Fees	-	\$212,574	\$212,574	Business
4116200-Personal Income Tax	\$91,970,879	\$2,051,831	\$94,022,710	Individuals
4117000-Retail Sales and Use Tax	\$25,384,350	\$708,117	\$26,092,467	Individuals
4117400-Retail Sales and Use Tax - 2011 Realignment	-	\$7,021,076	\$7,021,076	Individuals
4117600-Retail Sales and Use Tax - 1991 Realignment	-	\$3,528,004	\$3,528,004	Individuals
Total	\$131,552,883	\$30,801,311	\$162,354,194	

Source: California Department of Finance, June 2018

Table 2.2 above identifies the 21 major taxes and licenses in California and how much they were anticipated to generate in 2017-18. The table includes a description of each of the taxes and licenses, with the associated 7-digit State of California fund code. The table indicates whether the revenue was

allocated to the state's General Fund, a state special fund, or both. And the table shows who primarily paid the tax. For example, the PIT is paid primarily by individuals and households, whereas the Corporation Tax is paid by businesses. In many cases though, such as with the PIT and the Sales and Use Tax, both individuals and businesses pay some portion of the tax.

Across all of the taxes and licenses listed in Table 2.2, the state expects to collect \$162.4 billion in revenue. Most of this amount, or \$131.5 billion, is set for the General Fund while the remaining \$30.8 billion is earmarked for special funds. Together, the three main revenue sources – the PIT, the Corporation Tax, and the Retail Sales and Use Tax – represent the vast majority of General Fund revenue (97.8 percent) and combined General Fund/special fund revenue (87.4 percent).

Using the list in Table 2.2, we selected the taxes and licenses paid by businesses and allocated them across business services industries and all other industries. For some business taxes, we allocated payments based on the underlying NAICS 2-digit sector. So for example, the Motor Vehicles – Fuel Tax (Diesel) is most closely associated with sector 48-49 Transportation and Warehousing, which is included in business services. For other business taxes, we used economic data from IMPLAN on employee compensation, proprietor income, intermediate goods and services, and other property type income to proportionally allocate tax payments.

Additionally, we reviewed the list of the taxes and licenses primarily paid by individuals to see if it was possible to separate out business payments from these amounts. We did so for the PIT, using IMPLAN data to estimate the portion attributable to employer contributions to payroll, and using IMPLAN and California Franchise Tax Board (FTB) data to estimate the amount that business owners and partners pay on their income.¹⁰ We also did this for the Retail Sales and Use Tax. The BOE estimates that 68.2 percent of sales tax revenue comes from retail and food services, while the remaining 31.8 percent comes from all other industries.¹¹ Here, we assumed that the 68.2 percent was attributable to individuals while the 31.8 percent was due to businesses.

Our estimates of the major taxes and licenses paid by business services are presented below in Table 2.3. The table shows that business services industries pay approximately \$22.2 billion in taxes to the State of California each year. Of this, about \$5.4 billion pertains to the Corporation Tax, about \$9.0 billion is for the PIT (including \$2.3 billion in employer contributions and \$6.7 billion in taxes on owner income), about \$4.1 billion is for sales taxes on retail purchases made by business services, and about \$2.5 billion is for the Insurance Gross Premiums Tax. The remaining payments involve fuels or other motor vehicle fees.

All other industries in California pay a total of \$35.6 billion in major taxes and licenses to California. However, \$13.7 billion of this amount is effectively for "sin taxes" reflecting the unique aspects of alcohol, cigarettes, and cannabis associated with this set of industries. One can make a strong case that including these excise taxes prevents an apples-to-apples comparison, so subtracting out these amounts yields a total of \$21.9 billion. This amount is slightly less than what business service industries pay.

¹⁰ Exhibit A-8 of the FTB's latest revenue estimates for the PIT and the Corporation Tax show the tax-weighted distribution of income by source for the PIT and can be accessed here:

https://www.ftb.ca.gov/aboutFTB/Tax_Statistics/Reports/Revenue_Estimating_Exhibits/12312018.pdf

¹¹ See the BOE's "Statewide Taxable Sales, By Type of Business, 2016," at

https://www.boe.ca.gov/news/2016/t1_2016.pdf

**Table 2.3: California Major Taxes and Licenses Paid by Business Services Industries, 2017-18
(in Billions)**

Major Taxes and Licenses	Business Services Industries	Other Industries	Other Industries (Minus Sin Taxes)
Corporation Tax	\$5.386	\$5.860	\$5.860
Excise Tax - Beer and Wine	\$-	\$0.173	\$-
Excise Tax - Spirits	\$-	\$0.198	\$-
Cannabis Excise and Cultivation Tax	\$-	\$2.118	\$-
Cigarette Tax	\$-	\$11.246	\$-
Insurance Gross Premiums Tax	\$2.514	\$-	\$-
Jet Fuel Tax	\$0.003	\$-	\$-
Motor Vehicles - Fuel Tax (Diesel)	\$0.992	\$-	\$-
Motor Vehicles - Other Fees	\$0.213	\$-	\$-
Personal Income Tax (Employer Contribution)	\$2.277	\$2.962	\$2.962
Personal Income Tax (Owner Income)	\$6.686	\$5.511	\$5.511
Retail Sales and Use Tax	\$4.093	\$7.556	\$7.556
Total	\$22.163	\$35.623	\$21.889

Source: Encina Advisors

2.3 Context for Taxes Paid by Business Services

In light of the \$22.2 billion in state taxes paid annually by business service industries, the real question is Does this amount make sense for California? In other words, is \$22.2 billion too low, too high, or in line with expectations?

One way to answer this question is to think about the level of taxes relative to the amount of economic activity. As shown in Table 2.1, business services industries in California represent approximately 40.7 percent of economic output and 35.1 percent of value added. Thus, one would expect business services to be responsible for somewhere between 35.1 percent and 40.7 percent of business-related taxes in California. The \$22.2 billion of state taxes paid by business service industries represents 38.4 percent of the \$57.8 billion in business-related taxes in Table 2.3, which is in line with expectations. However, the

\$57.8 billion total includes the \$13.7 billion in sin taxes referenced earlier. Subtracting the sin taxes means business services industries are actually responsible for 50.3 percent of all business-related taxes, which is significantly above their contribution to California economy.

Another way to address this question is to look at spending in the economy. The U.S. Bureau of Economic Analysis tracks spending in the U.S. economy and the states through its Personal Consumption Expenditures (PCE) and other measures. The Bureau of Economic Analysis (November 2017, Chapter 5) notes that consumer spending on goods and services in the U.S. economy accounts for about two-thirds of domestic final spending, making it the primary engine that drives future economic growth. This means the remaining third of final spending is attributable to business.

Applying the rough PCE percentages to the economic activity statistics in Table 2.1, we would expect business services industries to be responsible for somewhere between 11.6 percent and 13.4 percent of spending across the California economy. Note, however, that the \$22.2 billion in taxes paid by business services is 16.8 percent of the \$131.6 billion in major taxes and licenses paid into the General Fund as shown in Table 2.2. Additionally, it represents 13.7 percent of the \$162.4 paid into the General Fund and special funds. This suggests that business services industries are paying more taxes than their relative share of spending in the state. It also indicates that any significant amount of new taxes – such as through a sales tax on business services – would impose an unfair burden on this segment of the economy.

3. SALES TAXES ON BUSINESS SERVICES AND CALIFORNIA'S BUDGET VOLATILITY

This section addresses the assertion by advocates of a sales tax on business services that it would reduce California's budget volatility, particularly with respect to the state's General Fund. It does so first by discussing the scope and causes of this volatility. It then explores the volatility of business services, models the potential impact that a sales tax on business services would have had historically on General Fund volatility, and forecasts business services tax revenue five years out. Finally, it compares a sales tax on business services to a handful of alternatives that potentially could reduce budget volatility.

3.1 California's Budget Volatility

California's experience with budget volatility the past two decades is widely documented and well understood. The Commission on the 21st Century Economy (COTCE), formed in the aftermath of the Great Recession, summarized the problem this way:

While California's economy has changed dramatically, the basic structure of its tax system has remained mostly the same, relying on three chief taxes [personal income tax, sales and use tax, and corporation tax] for state funding. In some years, the state has seen its coffers overflow, but in periods of economic downturns, the state has struggled to raise sufficient revenues. Tax rates have been increased on steadily narrowing tax bases. That has led to significant shifts to the sources of revenue that do not necessarily reflect the overall economy of the state.... (COTCE, September 2009, p. 5)

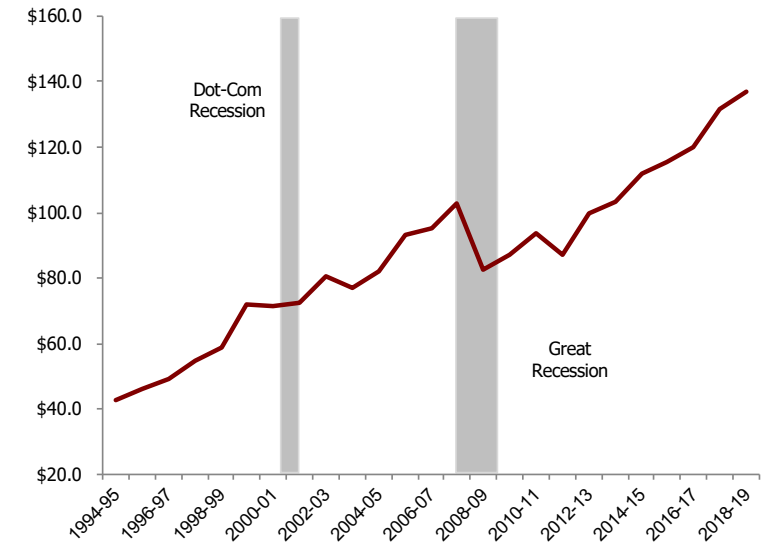
In other words, the state collects much more revenue than it needs in some years and it collects far less in others, especially during economic slowdowns. This is attributable to California's particular mix of funding sources and its increasing reliance on a limited set of taxpayers.

The magnitude of California's budget volatility problem can be seen in Figure 3.1 below, which shows General Fund revenues from fiscal year 1994-95 to 2018-19. The chart shows increasing revenue from about \$43 billion to \$137 billion over the 25-year time period (in current dollars), punctuated by sharp spikes and drops. The volatility is noticeable during the dot-com recession and the Great Recession, which are highlighted in gray on the chart, although it is not confined to these periods of economic downturn. Sixteen times over the past 25 years, year-over-year increases or decreases in revenue exceeded 5 percent, and six times they exceeded 10 percent.

It is commonly accepted that the main causes of California's budget volatility are its increasing reliance on personal income tax (PIT) revenue coupled with its large tax burden on high-income residents. With respect to the state's increasing reliance on the PIT, personal income taxes, as mentioned earlier, are now responsible for 70 percent of General Fund revenue in the state budget. By comparison, in 1975-76 sales and use taxes were responsible for the largest share of General Fund revenue (at 40 percent).

This outsized impact of personal income taxes on California government revenue arose for multiple reasons. Included in these reasons certainly is the shift from a goods-based economy to a services-based economy. But they also include significant choices made by politicians in Sacramento and the electorate. Notably, voters passed Proposition 30 in November 2012 which, among other things, raised personal income taxes for seven years on those making more than \$250,000 a year. Voters then passed Proposition 55 in November 2016 to extend these temporary tax increases for another 12 years. Additionally, the Legislature enacted a major "realignment" of state program responsibilities and revenues to local governments for various criminal justice, mental health, and social services programs as part of the 2011-12 budget. Under this realignment, the General Fund sales tax rate was reduced to

**Figure 3.1: General Fund Revenues from 1994-95 to 2018-19
(in Billions)**



Source: California Department of Finance, January 2019

3.9375 percent from 6 percent effective July 1, 2011, with the creation of the Local Revenue Fund 2011 and the expiration of the 1 percent temporary rate that had been in effect since April 2009. Absent the diversion of funding, the General Fund would have an extra \$7.4 billion in sales tax revenue each year (California Department of Finance, June 2018).

In addition to California’s increased reliance on the PIT is the fact that the burden for much of this revenue has fallen on high-income residents. Propositions 30 and 55 were notable because they imposed a 12.3 percent tax rate on taxable income between \$500,000 and \$1,000,000 and a 13.3 percent tax rate on taxable income over \$1,000,000. These represented 32 percent and 29 percent increases over the previous tax rates of 9.3 percent and 10.3 percent, respectively. The 13.3 percent rate is now the highest state income tax rate in the nation.¹² The sharply progressive nature of California’s income tax system means that as of 2015, tax filers making more than \$500,000 a year paid roughly half of all personal income tax revenue collected (LAO, April 12, 2018, p. 12).

Importantly, high-income taxpayers derive a disproportionate amount of their income from capital gains. The Legislative Analyst’s Office (LAO, February 8, 2017, p. 7) describes capital gains as being by far the most volatile part of the California PIT tax base. From 1990 to 2014, capital gains exhibited average deviations (AD) from its growth rate of 35.3 percent, meaning that in any given year capital gains could be on average 35.3 percentage points higher or lower than what the growth trend would predict. That makes capital gains more than ten times as volatile as the part of salaries and wages in the PIT tax base.

Although capital gains are a smaller component of PIT revenue, they still are sizeable. Table 3.1 below shows capital gains revenue as a percentage of General Fund tax revenue from 2006-07 to the present. Capital gains during this period ranged from a low of \$3.0 billion around the Great Recession to a

¹² See <https://taxfoundation.org/state-individual-income-tax-rates-brackets-2018/>

Table 3.1: Capital Gains Revenue as a Percentage of General Fund Tax Revenue

Fiscal Year	Tax Revenue from Capital Gains (in Billions)	Total General Fund Tax Revenue (in Billions)	Capital Gains Percentage
2006-07	\$10.0	\$95.4	10.5%
2007-08	\$9.0	\$101.3	8.9%
2008-09	\$3.9	\$81.7	4.7%
2009-10	\$3.0	\$86.6	3.4%
2010-11	\$4.5	\$92.0	4.9%
2011-12	\$6.0	\$85.3	7.1%
2012-13	\$9.6	\$97.6	9.8%
2013-14	\$8.7	\$103.0	8.5%
2014-15	\$11.5	\$113.8	10.1%
2015-16	\$11.5	\$118.9	9.7%
2016-17	\$11.4	\$122.1	9.3%
2017-18	\$13.0	\$129.3	10.1%
2018-19	\$13.3	\$135.1	9.8%

Source: California Governor’s Office, January 10, 2018, p. 157

high of \$13.3 billion most recently. While capital gains represented less than 5 percent of General Fund revenue for a handful of years, in seven of the 13 years shown they were above 9 percent.

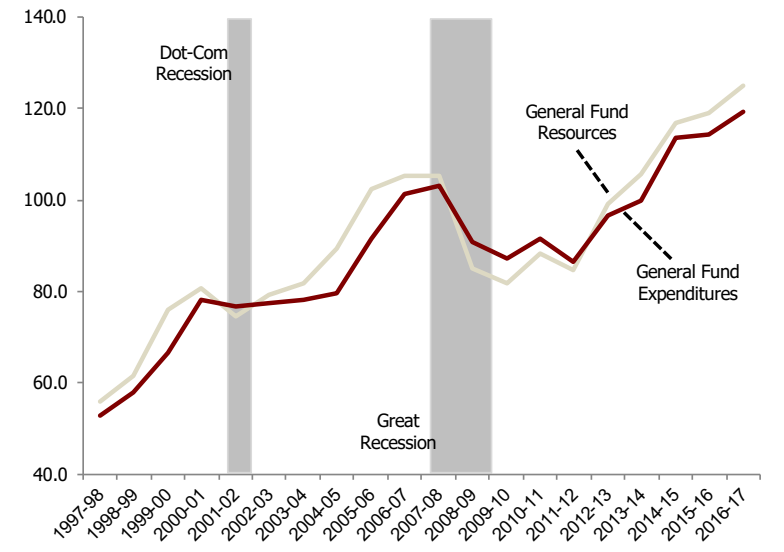
Overall, the LAO (September 28, 2017) estimates that approximately 40 percent of the PIT volatility results from California’s progressive rate structure that taxes higher incomes at higher rates. Another 40 percent of PIT volatility results from choices made about the types of income to tax, such as capital gains. The remaining 20 percent is attributable to deductions and credits, which primarily reduce the tax liabilities of low-income and middle-income taxpayers. These are taxpayers whose total income is generally stable.

Revenues are just one piece of California’s budget volatility problem, though. The COTCE’s reference to “sufficient revenues” at the beginning of this section implies that another factor, namely government spending, interacts with revenue generation to create the budget volatility problem. Sufficiency means that there is enough funding to meet for California to meet its goals as stated in its annual budget. Generally speaking, volatility in revenues has less of an impact on a budget with spending constraints and significant reserve requirements, and more of an impact on a budget where every last dollar is spent.

How does California fare when it comes to government spending? Historical data show that California routinely spends almost all of the revenue it has every year. Figure 3.2 below presents General Fund resources and expenditures from FY 1997-98 to FY 2016-17, where resources include revenue, transfers and prior savings. Over this time period, spanning the dot-com recession and the Great Recession but also periods of substantial economic growth, General Fund expenditures averaged 97.1 percent of General Fund resources.

This tendency to spend almost all available resources continues to the present, partly driven by structural factors. As the LAO (March 7, 2018) points out, California currently has two mechanisms to maintain state budget reserves, the Special Fund for Economic Uncertainties (SFEU) and the Budget Stabilization Account (BSA). The SFEU is the state’s discretionary reserve that essentially represents the differences in spending and available resources in a given fiscal year, while the BSA is the state’s “rainy day fund” that sets aside up to 10 percent of General Fund revenue to respond to fiscal budget emergencies or natural or man-made disasters. However, large SFEU balances can trigger tax reductions by law. Additionally, the

**Figure 3.2: General Fund Resources vs Expenditures, 1997-98 to 2016-17
(in Billions)**



Source: California Department of Finance, January 2019

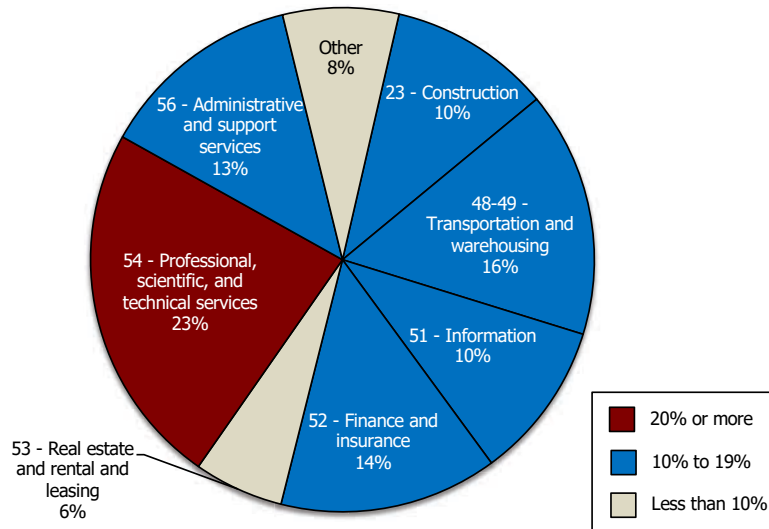
BSA is capped once its maximum size is reached, requiring any excess funding to be spent on infrastructure. This should be kept in mind by policymakers when devising solutions to the state’s budget volatility problem, since adding more revenue would do little to mitigate volatility if this additional revenue is simply expended on more government programs.

3.2 The Volatility of Business Services

To understand how a sales tax on California business services might impact General Fund volatility, we estimated the taxable base of business services in the state using the methodology outlined in Appendix A. Our methodology used the State Board of Equalization’s (BOE’s) estimates of all untaxed services for the 2015-16 year as the most credible starting point, and then adjusted them according to a number of factors. These adjustments included: removing services revenue from industries exempted under SB 993; removing services revenue attributable to small businesses; applying factors to account for exported services (i.e., services provided by California companies to out-of-state customers) and imported services (i.e., services provided by out-of-state companies to California customers); removing services revenue consumed by the federal government (and by state and local governments, where applicable); and applying industry growth factors for the fiscal years 1997-98 through 2024-25.

As shown in Appendix B, we estimate that the taxable base for business services in California totals \$798.4 billion in 2018-19. This amount is spread across 12 different North American Industry Classification System (NAICS) 2-digit industrial sectors. The largest sector, professional, scientific, and technical services, comprises \$186.9 billion or 23 percent of the total. Five sectors comprise the bulk of the remainder, each one representing between 10 percent and 16 percent of the total: Transportation and warehousing (16 percent), finance and insurance (14 percent), administrative and support services (13 percent), construction (10 percent), and information (10 percent). The real estate and rental and leasing sector represents 6 percent. The other five industrial sectors combined total only 8 percent. This is shown in Figure 3.3 below.

Figure 3.3: California Taxable Services Base by Industrial Sector, 2018-19



Source: Encina Advisors

Notes: Other is comprised of the following sectors: 11 – Agriculture, forestry, fishing, and hunting; 21 – Mining, quarrying, and oil and gas extraction; 44-45 – Retail trade; 62 – Health care and social assistance; and 72 – Accommodation and food services

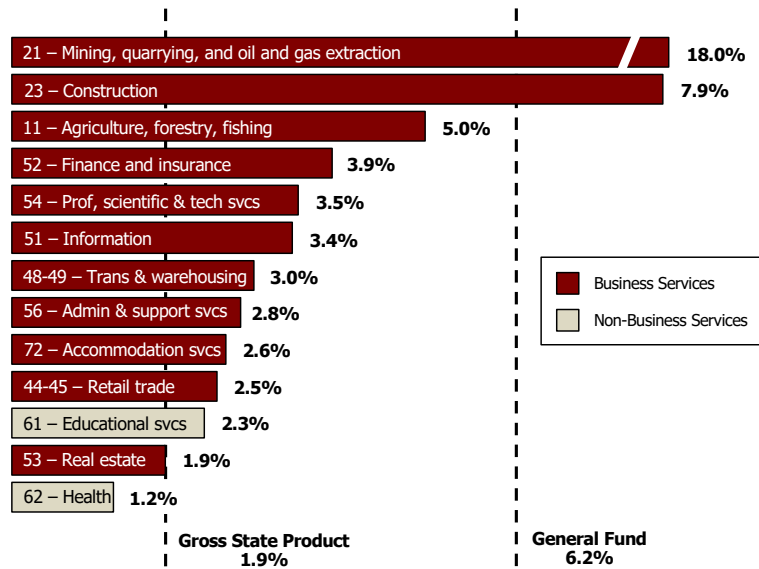
We then measured the volatility of each of these two-digit NAICS industrial sectors to illustrate the extent to which these services might be able to generate stable streams of sales tax revenue. There is no one correct way to measure volatility. To be consistent with the many analyses performed by the LAO on the subject, we used the AD method, which averages the annual deviations from a revenue stream’s compound annual growth rate (CAGR).¹³

We measured the volatility of each two-digit NAICS industrial sector by obtaining historical Gross State Product (GSP) data for California from the U.S. Bureau of Economic Analysis. This data spans 1997 to 2017 at the two-digit level of industry aggregation, and we the adjusted this data to reflect the fiscal years 1997-98 to 2016-17. We calculated the CAGR for each two-digit sector over this 20-year period and then calculated the AD for each sector. The results are shown below in Figure 3.4.

The chart shows that one of the smallest business services sectors, mining, quarrying, and oil and gas extraction, is also the most volatile. Its AD of 18.0 percent means that its year-to-year growth fluctuates above and below its 20-year growth trend by an average of 18.0 percentage points. Construction is less volatile with an AD of 7.9 percent. By contrast, the least volatile business service sectors are accommodation and food services at 2.6 percent, retail trade at 2.5 percent and real estate and rental and leasing services at 1.9 percent. These three sectors are also some of the smallest business services sectors.

¹³ See the LAO’s discussion of AD in its report, *Volatility of the Personal Income Tax Base*, at <https://lao.ca.gov/reports/2017/3548/Volatility-of-PIT-030817.pdf>

Figure 3.4: Average Annual Deviations from Compound Annual Growth Rate by Industrial Sector, 1997-98 to 2016-17



Sources: U.S. Bureau of Economic Analysis, California DoF, Encina Advisors

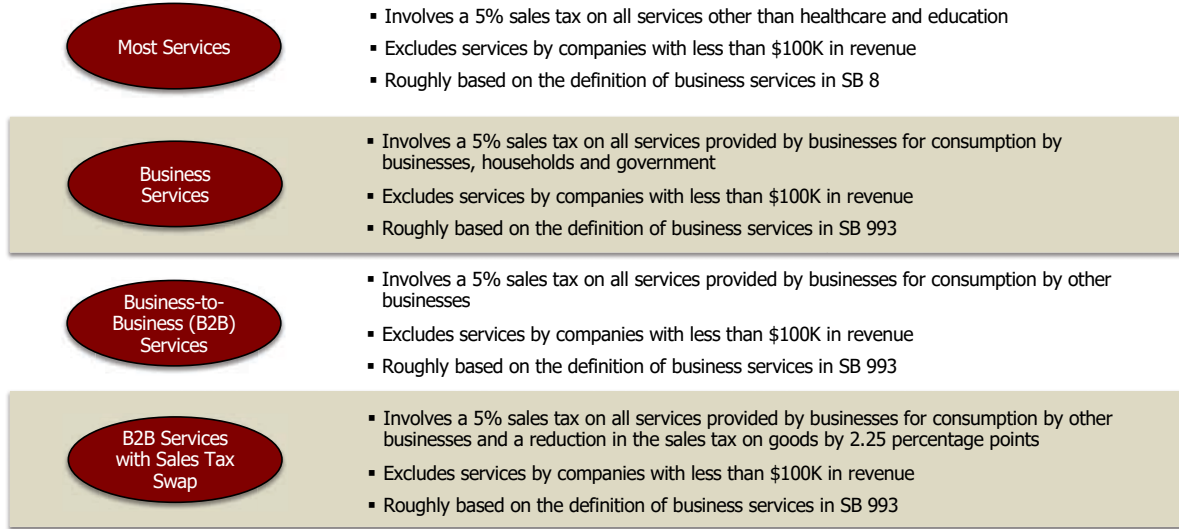
Figure 3.4 shows that overall, most of the business service industries exhibit ADs of 5.0 percent or less. And in most cases (with the exceptions being for agriculture, forestry, fishing; mining, quarrying, and oil and gas extraction; and construction), the ADs were smaller than their corresponding sectors' CAGRs. By way of comparison, we calculated the AD for the General Fund to be 6.2 percent over the 1997-98 to 2016-17 timeframe, with a 4.2 percent CAGR. This means that the General Fund is more volatile than most business services, so one might expect that a sales tax on business services would reduce General Fund volatility somewhat. Of course, the degree to which this could occur depends on the exact size and scope of the tax. We also calculated the AD for California's economy as a whole, as measured by GSP, to be 1.9 percent. So while business services are more stable than the General Fund they are also somewhat more volatile than the economy as a whole. Although the exact reasons for this are unclear, the implications are that business services in general are more sensitive to economic conditions than the remaining services sectors (e.g., education; health care; arts, entertainment and recreation) and goods-producing sectors.

Another point to note from Figure 3.3 is that the educational services and health care and social assistance sectors are two of the least volatile of all service sectors. Their volatility measures 2.3 percent and 1.2 percent, respectively. For the most part these services were exempted from the provisions in SB 993, which seems counterintuitive given that these are stable sources of revenue that presumably could reduce General Fund volatility.

3.3 Estimating the Impact of a Business Services Sales Tax

We used historical GSP data from 1997-98 to 2016-17 to illustrate how a sales tax on business services – had one been in effect during this time period – would have affected General Fund volatility. We used the annual growth rates for each 2-digit NAICS sector to extrapolate the taxable base for business services

Figure 3.5: Four Scenarios of a Sales Tax on Business Services



Source: Encina Advisors

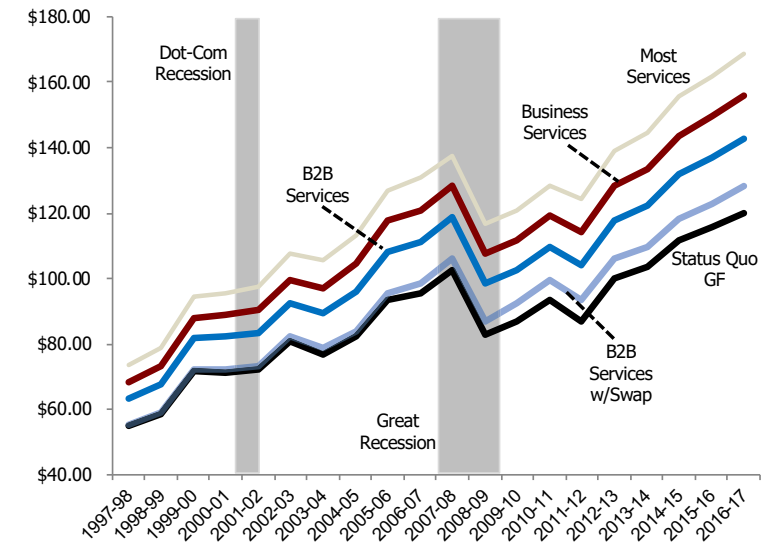
across the 20 years. We assumed a sales tax rate of 5 percent, and applied it to the taxable base for business services, assuming the rate stayed constant over the 20 years.¹⁴

We also looked at three other scenarios given that SB 522 currently has few details regarding the services tax and potentially could take a number of forms. In addition to a 5 percent business services tax, we examined a scenario with a 5 percent tax on *most* services. These included all services other than healthcare and education, similar to the list of taxable services defined in SB 8. We also examined a scenario with a 5 percent tax on business-to-business (B2B) services. Here, B2B services followed the definition of business services in SB 993, but we applied the tax only to purchases of business services made by other businesses. And we examined a 5 percent tax on B2B services with a corresponding 2.25 percentage point reduction of the sales tax on goods, similar to a provision in SB 993. This scenario involving B2B services tax with a sales tax swap on goods effectively sets the current sales tax for both services and goods at 5 percent. These scenarios are shown above in Figure 3.5.

Figure 3.6 below shows the results of our hypothetical scenarios over the 1997-98 to 2016-17 period compared to actual General Fund revenue (Status Quo General Fund). The results indicate that General Fund revenue growth would have been faster under each scenario relative to Status Quo General Fund revenue growth; the four scenarios had CAGRs ranging from 4.4 percent to 4.5 percent over the 20-year period while the Status Quo General Fund had a CAGR of 4.2 percent. Consequently, the General Fund would have been \$45.3 billion larger under the Most Services scenario relative to the Status Quo scenario by 2016-17 (i.e., \$165.3 billion vs. \$120 billion). For the Business Services, B2B Services and B2B Services with Sales Tax Swap scenarios, the differences would have been \$32.7 billion, \$22.7 billion and \$8.3 billion, respectively.

¹⁴ SB 522 does not indicate the tax rate at which services would be taxed. We assumed a sales tax rate of 5 percent because, falling roughly halfway between the 3 percent tax rate envisioned by SB 993 and the current statewide tax rate of 7.25 percent, it appears to be highly plausible.

Figure 3.6: General Fund Revenues with Estimated Sales Taxes on Services Included, 1997-98 to 2016-17 (in Billions)



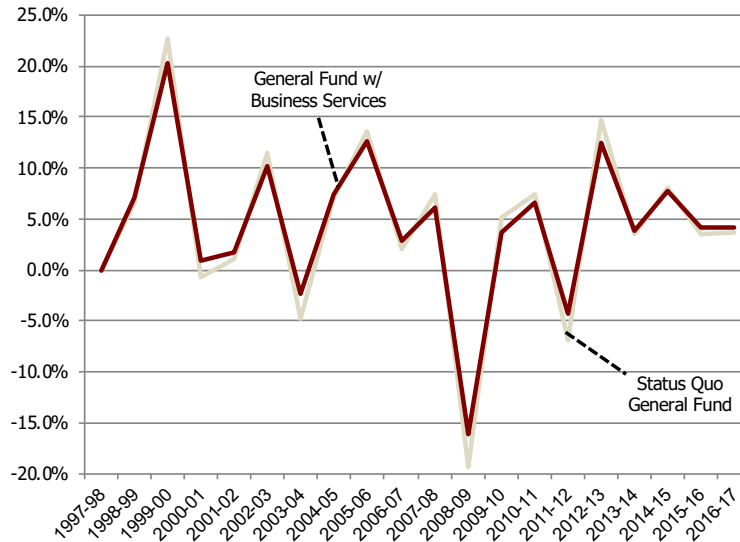
Sources: California DoF, U.S. Bureau of Economic Analysis, Encina Advisors

What also is notable about Figure 3.6 is that none of the four services-tax scenarios significantly reduced General Fund volatility. We calculated the volatility of the General Fund under each of the four scenarios and compared them to the Status Quo. The Most Services scenario had an AD of 4.8 percent over this 20-year period. By contrast, the Status Quo AD measured 6.2 percent. The Business Services, B2B Services and B2B Services with Sales Tax Swap scenarios had ADs of 5.1 percent, 5.4 percent and 6.0 percent, respectively. In other words, these scenarios reduced General Fund volatility by at most 23 percent (Most Services scenario). For the Business Services scenario in particular, the reduction in volatility was only 18 percent. Figure 3.7 below illustrates the volatility of the Business Services scenario against the Status Quo, showing year-over-year changes in revenue.

The primary reason that a sales tax on business services would not significantly reduce General Fund volatility is that even with the additional revenue, the General Fund still would rely heavily on the highly volatile PIT. Currently, the PIT is responsible for 70 percent of General Fund revenue, so any meaningful reduction in General Fund volatility would require either (1) a sufficiently large reduction in the PIT such that other, less volatile revenue sources become relatively more important in the General Fund, or (2) a sufficiently large increase in other, less volatile revenue sources to dilute the impact of PIT volatility.

An analysis of the likelihood and impacts of point (1) is beyond the scope of this report. We analyzed point (2) to better understand the magnitude of the sales tax on business services that would be required to create a meaningful reduction in General Fund volatility. The results of this analysis are presented below in Table 3.2 and Figure 3.8.

Figure 3.7: Volatility of Status Quo General Fund vs. General Fund with Sales Taxes on Business Services



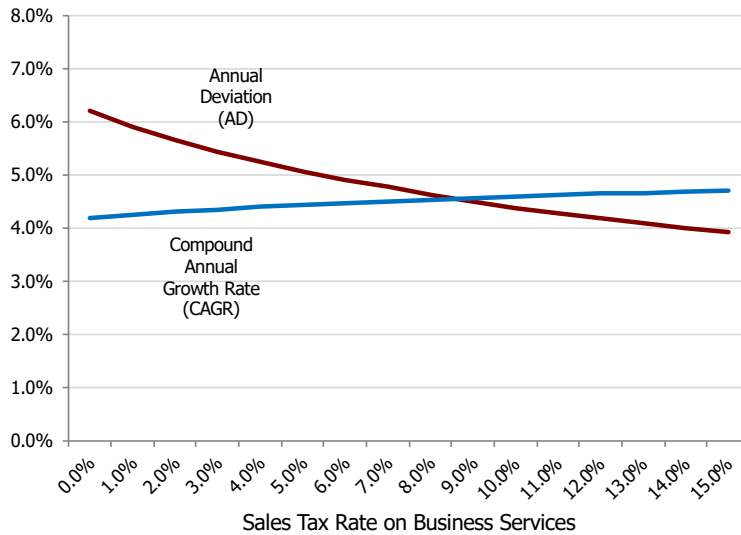
Sources: California DoF, U.S. Bureau of Economic Analysis, Encina Advisors

Table 3.2: Estimated Impact of a Sales Tax on Business Services on General Fund Volatility and Growth, 1997-98 to 2016-17

Hypothetical Sales Tax Rate	General Fund Average Annual Deviation (AD)	General Fund Compound Annual Growth Rate (CAGR)
0%	6.2%	4.2%
1%	5.9%	4.3%
2%	5.7%	4.3%
3%	5.4%	4.4%
4%	5.2%	4.4%
5%	5.1%	4.4%
6%	4.9%	4.5%
7%	4.8%	4.5%
8%	4.6%	4.5%
9%	4.5%	4.6%
10%	4.4%	4.6%
11%	4.3%	4.6%
12%	4.2%	4.6%
13%	4.1%	4.7%
14%	4.0%	4.7%
15%	3.9%	4.7%

Source: Encina Advisors

Figure 3.8: Estimated Impact of a Sales Tax on Business Services on General Fund Volatility and Growth, 1997-98 to 2016-17



Source: Encina Advisors

Table 3.2 and Figure 3.8 illustrate how a sales tax on business services would have affected General Fund volatility over the 1997-98 to 2016-17 period at different sales tax rates. For each sales tax rate from 0 percent to 15 percent, Table 3.2 and Figure 3.8 show the corresponding AD and CAGR that the General Fund would have experienced. With a 0 percent sales tax rate, the General Fund would have exhibited an AD of 6.2 percent and a CAGR of 4.2 percent, and increasing the sales tax rate would have slowly reduced the AD and increased the CAGR. At a 5 percent sales tax rate on business services, a plausible rate for SB 522, the General Fund AD still would be volatile at 5.1 percent against a trend growth rate of 4.4 percent. At a 9 percent sales tax rate, the General Fund AD would have just dipped below its CAGR – an improved but not ideal situation. Even with an unlikely sales tax rate of 15 percent, the General Fund AD would have been 3.9 percent, reflecting only a 37 percent reduction in the General Fund’s historical volatility.

Importantly, the results presented in Table 3.2 and Figure 3.8 are from a static analysis of tax rates. In other words, these results assume that underlying economic activity does not change despite the presence of higher prices for services caused by the tax. Presumably, businesses that faced higher costs for services they rely on as inputs into their own activities would purchase fewer of these services or look for lower-cost substitutes. And higher prices eventually would work their way to ordinary consumers, forcing changes to their spending patterns. These incentives mean that the results in Table 3.2 and Figure 3.4 likely overstate the impact that a sales tax on business services would have on the General Fund, especially at tax rates greater than 10 percent.

To complete our analysis of the impact of a business services tax on the General Fund, we also examined how the General Fund would have performed under the four scenarios during the Great Recession. The Great Recession serves as a useful focal point because of the severe impact it had on the General Fund, which led to additional calls for a reformed tax system in California. Assuming that California would have

**Table 3.3: General Fund During the Great Recession:
Four Scenarios vs. the Status Quo**

Scenario	2007-08 General Fund (Billions)	Total Deficit from Trend – 2008-09 to 2013-14 (Billions)	Total Deficit as Percentage of 2007-08 General Fund
Status Quo	\$102.57	\$(22.06)	-21.5%
Most Services	\$137.49	\$(24.76)	-18.0%
Business Services	\$128.47	\$(24.19)	-18.8%
B2B Services	\$118.67	\$(22.99)	-19.4%
B2B Services with Swap	\$106.18	\$(17.26)	-16.3%

Source: Encina Advisors

spent in a manner consistent with historical trends, we compared the estimated General Fund revenue under each scenario to the General Fund growth trend for that scenario, and calculated the total deficit during the six years from 2008-09 to 2013-14.

Table 3.3 above shows that had a sales tax on services been in place during the Great Recession, California still would have experienced severe fiscal distress. We calculate that under the Status Quo, California experienced a total deficit of \$22.06 billion relative to its 20-year growth trend, representing 21.5 percent of the General Fund as it stood in 2007-08. By comparison, under the Business Services scenario, California would have seen a total deficit of \$24.19 billion, or 18.8 percent of the estimated 2007-08 General Fund of \$128.47 billion. In other words, the state would have faced a larger budget hole during the Great Recession – \$24.19 billion rather than \$22.06 billion – despite having more resources in the form of a larger General Fund. The remaining scenarios would have been similar, with the exception of the B2B Services with Sales Tax Swap scenario, with California facing deficits larger than \$22 billion and representing more than 18 percent of the General Fund.¹⁵

3.4 Forecasting Business Services Sales Tax Revenue

In addition to a historical look at the potential impact of a sales tax on business services, we took a forward-looking perspective. Specifically, we wanted to understand the magnitude of revenue that might be generated by a sales tax on business services that went into effect January 1, 2020. We used our estimate of the taxable base for California business services of \$798.4 billion in 2018-19 as the starting point, and assumed it continued to grow at its historical CAGR of about 5.4 percent. We calculated sales tax revenue at a 5 percent tax rate for five years from 2019-20 through 2024-25. We compared this revenue with our projections of the General Fund, assuming that it continued to grow at its historical CAGR of about 4.2 percent. Note that these General Fund projections represent the fund as it is

¹⁵ The counterintuitive results for the B2B Services with Sales Tax Swap scenario arose because this scenario lessens the General Fund’s reliance on the sales tax for goods. Goods purchases dropped sharply due to the Great Recession as the collapse in the housing market reduced households’ net worth and the collapse in the financial markets restricted access to credit.

Table 3.4: Forecasted General Fund Revenue and Sales Tax on Business Services Revenue, 2019-20 to 2024-25 (in Billions and with Percentage of General Fund)

Year	General Fund	Most Services	Business Services	B2B Services	B2B Services w/Swap
2019-20	\$142.618	\$14.209 (10.0%)	\$10.519 (7.4%)	\$6.681 (4.7%)	\$2.719 (1.9%)
2020-21	\$148.599	\$29.872 (20.1%)	\$22.136 (14.9%)	\$14.073 (9.5%)	\$5.922 (4.0%)
2021-22	\$154.830	\$31.398 (20.3%)	\$23.290 (15.0%)	\$14.821 (9.6%)	\$6.437 (4.2%)
2022-23	\$161.323	\$33.001 (20.5%)	\$24.502 (15.2%)	\$15.606 (9.7%)	\$6.986 (4.3%)
2023-24	\$168.088	\$34.683 (20.6%)	\$25.775 (15.3%)	\$16.432 (9.8%)	\$7.570 (4.5%)
2024-25	\$175.137	\$36.506 (20.8%)	\$27.171 (15.5%)	\$17.301 (9.9%)	\$8.193 (4.7%)

Source: Encina Advisors

constituted today, namely without any sales tax revenue from services; we show General Fund revenue purely as a basis of comparison. We also performed this analysis for the remaining three scenarios. The results are shown above in Table 3.4.

We project that General Fund revenue will increase from \$142.6 billion in 2019-20 to \$175.1 billion in 2024-25. This obviously assumes continuous growth over this period, and thus that California does not experience any type of recession in the next five years. Under the Business Services scenario, we estimate that a 5 percent sales tax on business services would generate from \$10.5 billion in 2019-20 to \$27.2 billion in 2024-25.¹⁶ Again, this is a best-case scenario in that it assumes that economic actors do not change their behavior in response to a tax increase. That said, a 5 percent sales tax on business services could be expected to generate revenue that would increase the General Fund by between 7.4 percent and 15.5 percent.

For the Most Services scenario, a 5 percent sales tax on business services would generate from \$14.2 billion in 2019-20 to \$36.5 billion in 2024-25. In this case, adding sales taxes to business services could increase the General Fund by 10.0 percent to 20.8 percent. For the B2B Services and B2B Services with Sales Tax Swap scenarios, a 5 percent sales tax on services would generate from \$6.7 billion (4.7 percent increase) to \$17.3 billion (9.9 percent increase) and from \$2.7 billion (1.9 percent increase) to \$8.2 billion (4.7 percent increase), respectively.

Our analysis suggests that the amount of revenue to be generated from a sales tax on business services, while not insignificant, would not meaningfully reduce General Fund volatility. If the sales tax generated revenue equivalent to the size of the personal income tax, then conceivably the state could reduce budget volatility by just replacing the personal income tax with a sales tax on business services. However, Table 3.4 indicates that a 5 percent tax rate would generate no more than 16 percent of

¹⁶ Note that in 2019-20, the sales tax on services would be in effect only for half the year so the revenue collected is significantly smaller than in succeeding years.

General Fund levels in 2024-25, compared to the volatile PIT that is responsible for 70 percent of the General Fund. And again, the figures in Table 3.4 are based on a static analysis that assumes that businesses and consumers do not change their behavior in response to higher prices – and it is reasonable to assume that a 5 percent tax increase would change behavior significantly – so they are effectively overestimates.

3.5 Potential Alternatives to Business Services Sales Tax Revenue

If a sales tax on business services would not reduce California’s budget volatility in a meaningful way, what alternatives could the state pursue? One option is to focus on making California’s existing sales tax system on goods more efficient. The recent U.S. Supreme Court decision on *South Dakota v. Wayfair* eases the burden on states to establish a nexus regarding out-of-state retailers.¹⁷ This should help California increase the collection of e-commerce related sales tax revenue. Additionally, the Little Hoover Commission (March 2015) has recommended that California do more to address the state’s underground economy, which was estimated at the time to have cost the state at least \$10 billion a year in lost revenue.

Another alternative is to revisit the structure of the state’s personal income tax. Recall that the LAO (September 28, 2017) found that approximately 40 percent of the PIT volatility results from California’s progressive rate structure that taxes higher incomes at higher rates and another 40 percent of PIT volatility results from choices made about the types of income to tax. Consequently, reducing the progressivity of the tax would help with budget volatility. Additionally, the LAO (February 8, 2017, p. 5) highlighted that transfer payments and employer-paid benefits currently are not included in California’s PIT tax base, and it estimated that these two categories totaled \$521 billion in 2016.

Finally, policymakers could explore a sales tax on personal services rather than business services. Many economists believe that a sales tax on personal services is more appropriate because it creates fewer distortions in the economy (Cline, Phillips and Neubig, April 4, 2013; Auerbach, 2010). (See the next section for further discussion on the distortions created by a sales tax on business services.) In the BOE’s 2015 study on untaxed services in California, it found that firms in five sectors related to personal services (i.e., educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services except public administration) had receipts in 2015-16 totaling \$377.0 billion.

Note that this report does not recommend any of these alternatives. Instead, it just points out that they likely would be more effective and less damaging.

¹⁷ Read a MarketWatch opinion on the Wayfair decision [here](#).

4. SALES TAXES ON BUSINESS SERVICES AND THE ECONOMIC ENVIRONMENT

This section addresses the assertion that imposing a sales tax on business services will not harm California's business environment. It does so by outlining the inherent problems with a sales tax on business services, including pyramiding. It also discusses how these problems translate into potential harms for a variety of constituencies, including consumers and small businesses. It then examines four case studies on the potential impact on residential housing construction, school construction, transportation construction and maintenance, and small businesses to illustrate some of the unintended consequences that the California economy would face.

4.1 Inherent Problems with Sales Taxes on Business Services

While some see a sales tax on business services simply as a way to raise revenue for state government, imposing such a tax comes with myriad problems. These range from the practical considerations of administering the tax (e.g., how does one determine where a purchaser of services received the benefit of those services?) to the economic distortions created when the tax is imposed on some industries but not others (i.e., business services vs. personal services) and on some jurisdictions but not others (i.e., California vs. other states). These issues have been discussed in depth elsewhere, but we address a few of the more important problems below.

Compounds Cost Increases

Arguably, the most significant problem with a sales tax on services is the problem of pyramiding. The Council on State Taxation (Cline, Phillips and Neubig, April 4, 2013) describes pyramiding as the situation where the same services are taxed multiple times as they move through production to final retail sale. This happens when a business purchases an input that is subject to the sales tax, and then the subsequent sales of the business include the same input costs in the sales price subject to the sales tax a second time.

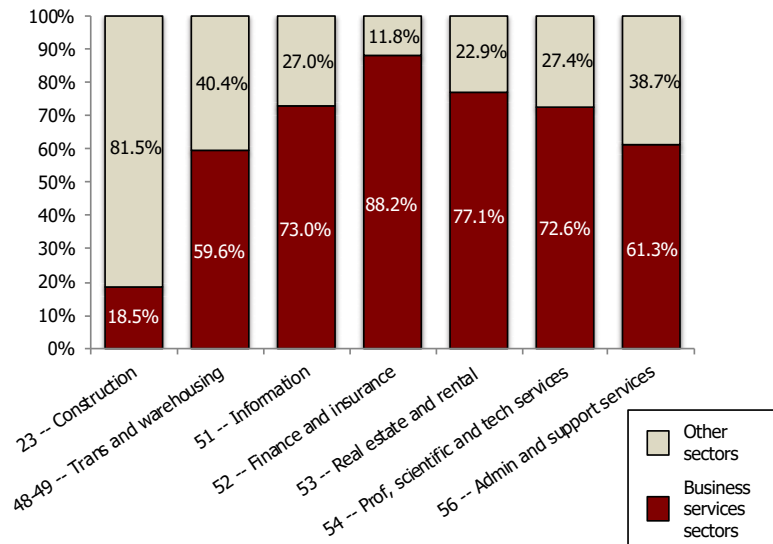
Consider the example of a California architect providing design services to a client. Architects regularly subcontract with engineering firms for specialized services, so the California architect would be required to pay sales taxes on the engineering services it utilized to meet the client's needs. The client would then pay sales taxes on the package of design services it received from the architect, which includes the engineering services as a component. Thus, the engineering services would be taxed at multiple points in the process and inflate the cost of services throughout. (The client effectively also would pay sales taxes on top of sales taxes.)

Pyramiding happens whenever a retail sales tax is imposed on business-to-business sales. This is one reason why many economists recommend taxing personal services rather than business services, since taxes on personal services are paid once by the end user rather than on intermediate sales (Auerbach, 2010, p. 9). On the tangible goods side of sales taxes, states try to reduce pyramiding by allowing exemptions for goods that are resold and for some intermediate production. However, similar types of protections on the services side have not been included in legislation for sales taxes on business services.¹⁸

Figure 4.1 below suggests that pyramiding would cause substantial distortions in California. Figure 4.1 uses 2-digit national NAICS data from the U.S. Bureau of Economic Analysis to show the sources of

¹⁸ SB 993 goes counter to economic theory by taxing business services and exempting personal services.

Figure 4.1: Source of Intermediate Commodities Consumed, by Industrial Sector



Sources: U.S. Bureau of Economic Analysis, 2017; Encina Advisors

intermediate commodities consumed, broken out by industrial sector. In other words, the chart takes the industrial sectors that are subject to a business services tax and indicates the extent to which firms in these sectors purchase commodities (goods or services) from industries that are subject to a business services tax. The chart shows that most business services firms obtain 60 percent or more of their intermediate commodities from other business services sectors. For firms in the finance and insurance sector, the amount is more than 88 percent. For firms in the professional, scientific and technical services sector, the amount is close to 73 percent. Even construction firms would be affected by the pyramiding from business services, albeit at lower levels. Additional detail on Figure 4.1 is provided in Appendix C.

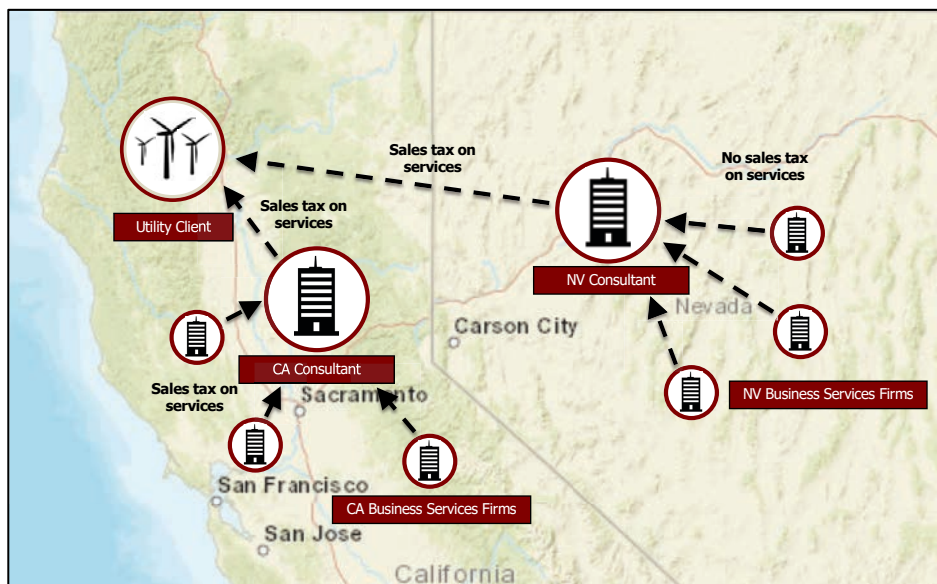
Creates an Uneven Playing Field

A sales tax on business services creates significant distortions in the economy, affecting how economic agents conduct their activities and impairing free competition. Put another way, these sales taxes create an uneven playing field that changes what people buy and from whom.

One way that this occurs is through exemptions from the tax. SB 993, for example, would have exempted numerous service industries, including health care services, education services, child care, rent, interest, and services provided by very small businesses. When the sales tax is applied to some industries and not others, it creates an artificial price differential between impacted industries and exempted industries. Economic theory suggests that when faced with such a situation, consumers will substitute lower-cost services for some of the higher-cost services (e.g., skip the tax preparer in favor of more child care). Thus, the tax creates winners and losers.¹⁹

¹⁹ Additionally, economic theory suggests there are wealth effects where the sales tax effectively reduces consumers' income and causes them to purchase less of everything.

Figure 4.2: Uneven Playing Field for California Companies



Sources: Encina Advisors, ESRI

Another way this occurs is by putting California companies at a disadvantage by artificially raising their cost structures relative to firms in other states. This is related to pyramiding, and is illustrated notionally in Figure 4.2 above. The figure shows a hypothetical utility in California deciding between two consultants, one based in California and one based in Nevada, for a project. While legislation like SB 522 likely would require either consultant to pay a state sales tax on the services provided, the California firm has a higher cost structure than the Nevada firm because of the services it receives in-state. The California firm, for example, pays sales taxes on the accounting, legal, information technology, and janitorial services it receives whereas the Nevada firm does not. Consequently, everything else being equal, the California firm would lose the project work because of cost considerations.

Represents a Tax on Labor

Business service industries are labor-intensive. This was shown earlier in Table 2.1, where business services firms represent roughly 35 percent of California's GSP (i.e., value added) but employ 44 percent of the state's workers. A sales tax on business services, then, effectively represents a tax on labor and could dampen employment in the state.

While California currently has very low unemployment of 4.2 percent (California Employment Development Department, January 18, 2019), not all regions in the state are faring equally well. Some larger counties in the Central Valley are still experiencing relatively high unemployment, including Fresno (7.5 percent), San Joaquin (6.1 percent), Stanislaus (6.3 percent) and Merced (8.2 percent). Two counties, Colusa and Imperial, remain mired in double-digit unemployment at 15.7 percent and 17.3 percent, respectively.

Additionally, some important industries like construction are facing challenges. The Turner Center for Housing Innovation at U.C. Berkeley notes that the construction industry has remained relatively small after the Great Recession, and anecdotal evidence indicates that the diminished number of

subcontractors cannot meet the demand for housing construction.²⁰ Moreover, recent readings from the American Institute of Architects' (AIA's) Architecture Billing Index, a predictor of future construction spending, show that the construction industry in the West region is teetering between continued growth and contraction. By making business services more costly, a sales tax on business services would make it more difficult to increase hiring – not to mention to prevent layoffs – in these areas of the state and these industries of concern.

Requires Significant Implementation Costs

Applying a sales tax on business services would impose significant costs on both private-sector businesses and state government. Businesses obviously would incur additional administrative costs to register with the California Department of Tax and Fee Administration (CDTFA) and report and regularly remit their sales tax payments. This burden would fall most heavily on small businesses, which have fewer administrative resources to handle tax collection and remittance.

Small service providers could be impacted by carrying costs as well. Professional services firms such as engineering firms often wait 120 days or more to be paid by their clients. However, the CDTFA requires firms with an average monthly sales tax liability greater than \$1,200 to file sales taxes quarterly but make monthly prepayments. The size of these prepayments could squeeze the cash flow of small companies.

Regarding costs to state government, the BOE (March 7, 2012; 2015), now part of the CDTFA, noted that its operations would be significantly impacted if a tax on services is implemented. Based on analyses regarding two bills instituting sales taxes on services, AB 2540 in 2012 and SB 8 in 2015, the BOE suggested that extending a broad-based tax on service providers' sales could add a few hundred thousand additional taxpayers. This would require sufficient funding for the state to hire, house, and train staff; identify and register affected businesses; make programmatic changes; respond to taxpayer inquiries; provide outreach to taxpayers; perform audit and collection functions; establish effective refund and appeals programs; and perform other administrative duties to effectively administer a services tax. The BOE estimated that each additional 100,000 taxpayers registered would require an additional 250 staff positions and \$32 million in ongoing funding.

4.2 Potential Harms Caused by Sales Taxes on Business Services

A number of possible harms could result from the imposition of a sales tax on business services. These follow from the inherent problems with this type of sales tax discussed previously.

California Businesses at a Competitive Disadvantage

As mentioned earlier, a sales tax on business services would put California companies at a disadvantage in the marketplace by artificially raising their cost structures relative to firms in other states. Because of pyramiding, the magnitude of this cost disadvantage can be substantial. Table 4.1 below represents a first approximation of the potential size of these impacts. The table shows the estimated effective tax rates for California business services firms that could result from a 5 percent sales tax on business services, and these estimates are based on the statistics shown in Figure 4.1. Business service firms purchase intermediate goods and services in the course of their activities, and because some of these services would be subject to a sales tax, these firms would face an average effective tax rate on their intermediate purchases ranging from 1.04 percent to 2.98 percent. As these higher costs get passed through the production process, the effective tax rate on final services no longer would resemble the

²⁰ See https://turnercenter.berkeley.edu/construction-costs#_ftnref3

Table 4.1: Estimated Effective Tax Rates for California Business Services Firms from a 5 Percent Sales Tax on Business Services, by Sector

Business Services Sector	Effective Tax Rate on Intermediate Purchases	Effective Tax Rate on Final Services
23 – Construction	1.04%	6.10%
48-49 – Transportation and warehousing	2.05%	7.15%
51 – Information	2.01%	7.11%
52 – Finance and insurance	2.98%	8.13%
53 – Real estate and rental and leasing	1.61%	6.69%
54 – Professional, scientific and technical services	1.76%	6.85%
56 – Administrative and support services	1.79%	6.88%

Source: Encina Advisors

(statutory) tax rate of 5 percent but instead could range from 6.10 percent to 8.13 percent in some industries.

Quantifying the impacts of the cost disadvantage to California firms is difficult. That said, it would not be controversial to suggest that a sales tax on services would lead to reductions in economic activity for many California firms. The results could include smaller company workforces, some business closures, and some business flight to other states to improve their competitiveness.

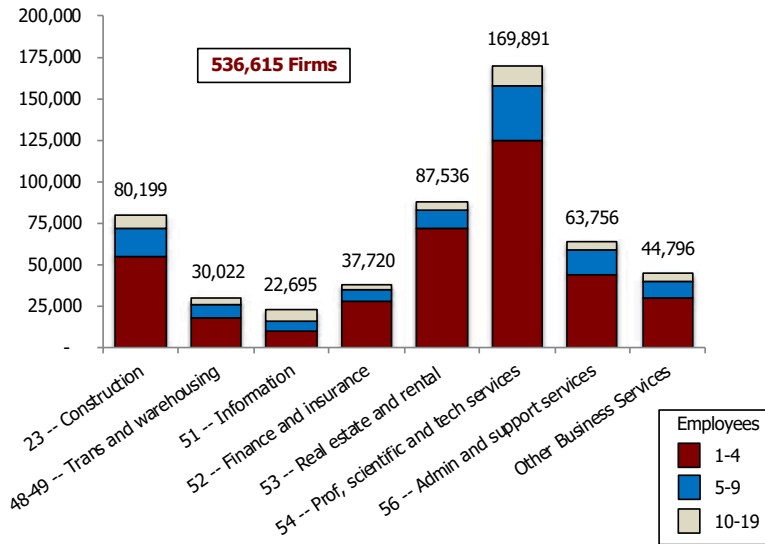
Increased Burden on Small Businesses

Small businesses are less able to adjust to a world with a sales tax on business services than their large business counterparts. This is because large companies have the resources to house many business services internally, such as by establishing internal legal, accounting, and human resource departments, rather than by outsourcing them. In this way, large companies can effectively circumvent the sales tax for these services. Small businesses are resource constrained, however, meaning they do not have the funds or the workload to justify hiring additional administrative staff. In most cases they will continue to outsource many of these business services – many of which would now be more expensive under a sales tax on services – putting them at a relative disadvantage.

If SB 522 were to exempt from the tax small businesses making less than \$100,000 annually (as was the case with the February 5 version of SB 993), hundreds of thousands of California small businesses would receive no relief. Figure 4.3 below shows a total 536,615 firms, broken out by business services sector, that would be subject to the tax. These are firms with fewer than 20 employees and with annual sales that exceed \$100,000. The data shows that the vast majority of these companies (380,425) have only one to four employees. There are 105,308 companies with five to nine employees, and 50,882 companies with 10 to 19 employees. Nearly 170,000 of these firms fall under professional, scientific and technical services. This is followed by real estate and rental services at 87,536 and construction at 80,199.

As above, these added pressures could result in some business closures as well as business flight. Reduced company workforces also are likely, but for some very small firms, eliminating workers is not possible. This raises the likelihood that the underground economy could grow as some companies resort to paying for services under the table.

Figure 4.3: California Business Services Companies with Fewer than 20 Employees and Annual Sales Greater than \$100,000



Source: Reference USA

Notes: "Other business services" is comprised of the following sectors:
 11 – Agriculture, forestry, fishing, and hunting; 21 – Mining, quarrying, and oil and gas extraction; 44-45 – Retail trade; 62 – Health care and social assistance; and 72 – Accommodation and food services

Higher Costs for Consumers

A sales tax on business services unavoidably would increase costs for consumers. This is not just because individuals as well as businesses require the assistance of engineers, attorneys, and accountants. It is also because consumers will face higher prices for non-business services. Even though SB 522 would likely attempt to shield the general public from the sales tax similarly to SB 993 – for example by exempting health care services, education services, and child care – goods and services that people rely on daily also depend on business services.

Take child care as a case in point. National statistics from the U.S. Bureau of Economic Analysis indicate that nearly 60 percent of the intermediate goods and services purchased by social assistance firms including child care involve business services. Table 4.2 below displays these intermediate business services and their expenditure shares. As shown, the three largest expenditures by child care firms with respect to intermediate goods and services are other real estate (22.1 percent), miscellaneous professional, scientific, and technical services (7.8 percent), and insurance carriers and related activities (5.3 percent). Consequently, our calculations indicate that a 5 percent sales tax on business services would increase the cost of child care by 1.63 percent, despite it being exempt from the tax.

Table 4.2: Estimated Effective Tax Rates for California Business Services Firms from a 5 Percent Sales Tax on Business Services, by Sector

Intermediate Service	Expenditure Share	Intermediate Service	Expenditure Share
Other real estate	22.1%	Other transportation and support activities	1.2%
Miscellaneous professional, scientific, and technical services	7.8%	Motion picture and sound recording industries	1.2%
Insurance carriers and related activities	5.3%	Legal services	1.1%
Administrative and support services	4.3%	Waste management and remediation services	0.9%
Management of companies and enterprises	2.5%	Rental and leasing services and lessors of intangible assets	0.7%
Federal Reserve banks, credit intermediation, and related activities	1.8%	Air transportation	0.6%
Data processing, internet publishing, and other information services	1.6%	Warehousing and storage	0.3%
Computer systems design and related services	1.6%	Construction	0.2%
Broadcasting and telecommunications	1.5%	Transit and ground passenger transportation	0.2%
Securities, commodity contracts, and investments	1.5%	Truck transportation	0.1%
Publishing industries, except internet (includes software)	1.3%	Other Sectors	42.3%

Source: U.S. Bureau of Economic Analysis, 2017

4.3 Impacts to the California Economy

We developed four brief case studies to illustrate the implications that a sales tax on business services would have on different California industries. We found that instituting such a tax would create ripples of cost increases across the California economy, resulting in a series of unintended consequences for residents who otherwise would be shielded from the tax. The case studies comprise residential housing construction, K-12 school construction, SB 1 and transportation infrastructure, and small business.

Case Study 1: Residential Housing Construction

California is not building enough housing to meet demand. By some estimates, the state fell 3.4 million housing units short of demand from 2000 to 2015. This and a booming economy have led to sky-high housing prices and problems of affordability for millions of Californians. The problem is so severe that Governor Gavin Newsom recently proposed a \$1.75 billion increase in funding for housing initiatives, including \$750 million in grants to help local governments plan for increased housing production and \$500 million to expand the mixed-income loan program (Ashmun, Maddy, February 1, 2019).

Could a sales tax on business services exacerbate California’s housing situation? SB 993, the previous sales tax on services bill, recognized the potential problem and specifically exempted the residential housing construction industry from the bill’s proposed tax. However, the evidence suggests that a sales tax still would increase the cost of residential construction in California even with an exemption, and would increase the cost of housing in the state as a result. This is because a variety of industries support residential housing construction, and many of these would be taxed.

According to the National Association of Home Builders (Ford, December 2017), there are seven major components to the sale price of new residential housing:

- *Finished Lot Cost:* Cost for land, including financing, all entitlements, permits, site investigations by technical consultants (e.g., geologists, civil engineers, biologists), and all improvements;
- *Total Construction Cost:* Housing construction costs covering site work (including architectural design and engineering), foundations, framing, exterior finishes, major systems, interior finishes and final steps;
- *Financing:* Cost of mortgage, including interest;
- *Overhead and General Expenses:* Salaries and benefits of administrative personnel of the homebuilder, office space, and outsourced services;
- *Marketing:* Advertising costs for the homebuilder;
- *Sales Commission:* Seller's fee; and
- *Profit.* Net profit for the homebuilder after operating expenses.

Table 4.3 below shows these estimated costs for new single-family housing construction in California. The table takes national estimates for 2017 from the National Association of Homebuilders and adjusts them (1) for California using data from the U.S. Census Bureau on the average sales price of houses sold by region, and (2) for inflation using consumer price indices calculated by the California Department of Finance. We modeled a 5 percent sales tax on business services as follows: We associated each of the first five cost categories (i.e., finished lot cost, total construction cost, financing cost, overhead and general expenses, and marketing cost) with a 2-digit NAICS sector. To account for pyramiding in these five cost categories, we applied the 5 percent sales tax rate on the purchases of intermediate goods and services for these sectors as appropriate, and recalculated the category costs. To account for the sales tax on final services provided through these five cost categories, we then applied the 5 percent tax to the recalculated costs for each category except total construction cost. We did not apply pyramiding or final sales tax factors to the sales commission and profit categories, but instead kept these as percentages of the final sales price (4.1 percent and 10.7 percent, respectively).

Table 4.3 shows that even with residential housing construction (i.e., total construction costs) exempted from the tax, the sales price of new housing would increase markedly because of all of the supporting services. A 5 percent sales tax on services would add more than \$16,500 to the price of a new home, a 3 percent increase. This means, among other things, that a sales tax on business services could quickly erode the value of funds spent on housing initiatives and keep more Californians out of homes.

Table 4.3: Increase in Housing Costs for New Single-Family Housing in California from a Sales Tax on Business Services

Housing Cost Component	2019-20 Cost Estimate	Cost with 5% Sales Tax on Business Services
Finished Lot Cost	\$117,409	\$125,269
Total Construction Cost	\$303,440	\$306,605
Financing Cost	\$9,745	\$10,537
Overhead and General Expenses	\$27,867	\$29,776
Marketing Cost	\$6,782	\$7,247
Sales Commission	\$22,268	\$23,071
Profit	\$58,582	\$60,210
Total Sales Price	\$546,094	\$562,715
Difference	-	\$16,621
Percent Increase	-	3.0%

Source: Ford, Carmel (December, 2017); Encina Advisors

Case Study 2: School Construction and Rehabilitation

Californians have paid increasing attention of late to the poor conditions of their K-12 school facilities. These facilities, encompassing nearly 10,500 public schools including more than 1,200 charter schools, provided instruction and educational services to more than 6.2 million students in 2017-18.²¹ Yet school districts argue that they do not currently have sufficient resources to maintain their facilities, modernize their buildings, and develop new facilities to accommodate enrollment growth. As researchers at the University of California Berkeley have noted, the state’s public-school districts – particularly those in low-wealth areas – experience significant funding shortfalls for their facilities leaving them unable to spend the nearly \$18 billion a year in needed investments.²² This lack of resources is one reason why California voters in 2016 passed Proposition 51, which authorized \$7 billion in state general obligation bonds for the construction and modernization of K-12 schools.

Consequently, given the state’s sizeable need to invest in its school facilities, it is imperative that its limited dollars are spent effectively. Could a sales tax on business services degrade erode the value of the funding spent on California’s school construction and rehabilitation efforts, thereby degrading their effectiveness? California Department of Education (CDE) statistics show that in 2017-18, the state spent \$709 million on capital outlay for facilities acquisition and construction as well as for plant maintenance and operations (including state General Fund expenditures and County School Service Fund expenditures).²³ The CDE breaks down capital outlay into six categories, and the statistics provide allocation percentages of these expenditures: Land (3.8 percent); land improvements (5.4 percent); buildings and improvements of buildings (49.2 percent); books and media for new school libraries or

²¹ See <https://www.cde.ca.gov/ds/sd/cb/ceffingertipfacts.asp>

²² See Jain, Liz S. and Jeffrey M. Vincent, *Building Pressure: Modeling the Fiscal Future of California K-12 School Facilities*, Berkeley: Center for Cities and Schools, University of California Berkeley, September 2016 at http://citiesandschools.berkeley.edu/uploads/Jain_Vincent_2016_Building_Pressure_final.pdf

²³ See <http://www.ed-data.org/state/CA>

major expansion of school libraries (0.03 percent); equipment (35.6 percent); and equipment replacement (6.1 percent).

Table 4.4: Increase in School Construction Costs in California from a Sales Tax on Business Services

Facility Component	2019-20 Cost Estimate	Cost with Pyramiding	Cost with 5% Sales Tax on Business Services
Land	\$28,616,567	\$29,078,177	\$29,078,177
Land Improvements	\$41,305,239	\$42,032,927	\$44,134,573
Buildings and Improvements	\$374,451,256	\$378,356,737	\$382,140,304
Books and Media	\$194,361	\$198,259	\$208,172
Equipment	\$270,401,924	\$275,684,240	\$275,684,240
Equipment Replacement	\$46,520,964	\$47,429,753	\$47,429,753
Total Expenditure	\$761,490,311	\$772,780,092	\$778,675,219
Difference	-	\$11,289,781	\$17,184,907
Percent Increase	-	1.5%	2.3%

Source: CDE; Encina Advisors

We modeled a 5 percent sales tax on business services as follows: We adjusted 2017-18 spending for inflation using consumer price indices calculated by the California Department of Finance. We then associated each of the cost categories with a 2-digit NAICS sector, accounted for pyramiding in these cost categories by applying the 5 percent sales tax rate on the purchases of intermediate goods and services for these sectors as appropriate, and recalculated the category costs. We then applied the 5 percent tax rate to the final purchases of land improvements, buildings and improvements of buildings, and books and media for new school libraries.

Table 4.4 above shows that a 5 percent sales tax on services would increase annual facilities construction and modernization costs by \$17 million in 2019-20 for state and local governments. That represents a cost increase of 2.3 percent from a tax designed to target businesses rather than schools. More importantly, it means that over 10 years, potentially \$170 million of needed school upgrades would not get completed absent additional funding.

Case Study 3: SB 1 and Transportation Infrastructure

The Legislature passed SB 1, the Road Repair and Accountability Act of 2017, to provide a significant infusion of new state funding to California’s transportation system. This legislation was primarily a response to the deteriorating condition of California’s infrastructure and the allegedly inadequate resources the state had at the time to address it. As SB 1 notes, over the next 10 years the state faces a \$59 billion shortfall to adequately maintain the existing state highway system, while cities and counties face a \$78 billion shortfall to adequately maintain the existing network of local streets and roads. These poorly maintained roads mean that California motorists are spending \$17 billion annually in extra maintenance and car repair bills, which is more than \$700 per driver.²⁴

Over 10 years, SB 1 will provide \$53 billion for transportation, including \$15 billion for state highway repairs and maintenance, \$4 billion in state bridge repairs, \$3 billion for state trade corridors, and \$2.5

²⁴ See the text of SB 1 here https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1

billion for the state's most congested commute corridors. SB 1 also will provide \$15 billion for the maintenance and repairs of local roads, \$2 billion in matching funds for local partnership projects, \$7.6 billion for transit and intercity rail, and \$1 billion for active transportation projects including bicycle lanes and pedestrian crosswalks. It is estimated that within 10 years, SB 1 will add a total of \$6.8 billion annually to California's transportation system. This compares to a total of about \$7.2 billion in state funding for transportation programs in 2016-17.²⁵

Could a sales tax on business services reduce the impact of SB 1 funding? We modeled a 5 percent sales tax on business services using the following information: For 2019-20, the Newsom administration proposes to spend a total of \$4.8 billion in SB 1 funding (California Governor's Office, January 9, 2019). This total includes \$4.5 billion in the following identified priorities:

- *Maintenance and Rehabilitation of the State Highway System:* \$1.2 billion;
- *Repairs to Local Streets and Roads:* \$1.2 billion;
- *Maintaining and Repairing the State's Bridges and Culverts:* \$400 million;
- *Trade Corridor Enhancement Program:* \$307 million;
- *Solutions for Congested Corridors Program:* \$250 million;
- *Local Transit Operations:* \$458 million;
- *Capital Improvements for Transit, Commuter and Intercity Rail:* \$386 million;
- *Local Partnership Projects:* \$200 million;
- *Active Transportation Program Projects:* \$100 million;
- *Expansion of Freeway Service Patrols:* \$25 million; and
- *Local Planning Grants:* \$25 million.

With the exception of local transit operations, the expansion of freeway service patrols and local planning grants, these priorities represent \$4.043 billion in capital investments in the upcoming year.

Transportation construction projects generally all have three cost components: preliminary engineering, right of way, and construction. Here, preliminary engineering represents the design phase of a project and its associated expenses, right of way refers to the purchase of the land required for construction of the project, and construction costs are the expenses incurred during the build phase including labor and materials. Preliminary engineering, right of way, and construction costs can differ across projects due to multiple factors such as project type (e.g., roadway, bridge, railway), construction type (e.g., new construction, rehabilitation), number of lanes, location (e.g., urban, rural) and terrain. That said, the Midwest Economic Policy Institute examined each state's highway preliminary engineering, right of way and construction costs from 1993 to 2015 and normalized these costs using each state's total lane miles. For California in particular, the Midwest Economic Policy Institute estimated that per lane mile,

²⁵ See a report on 2018-19 transportation issues by the LAO at <https://lao.ca.gov/Publications/Report/3745>

**Table 4.5: Increase in SB 1 Construction Costs in California
from a Sales Tax on Business Services
(in Millions)**

Category	2019-20 Cost Estimate	Cost with Pyramiding	Cost with 5% Sales Tax on Business Services
Maintenance & Rehabilitation of State Highway System	\$1,241	\$1,256	\$1,283
Repairs to Local Streets and Roads	\$1,241	\$1,256	\$1,283
Maintaining and Repairing the State's Bridges	\$414	\$419	\$428
Trade Corridor Enhancement Program	\$317	\$321	\$328
Solutions for Congested Corridors Program	\$258	\$262	\$267
Local Transit Operations	\$474	\$479	\$479
Capital Improvements for Transit	\$399	\$404	\$413
Local Partnership Projects	\$207	\$209	\$214
Active Transportation Program Projects	\$103	\$105	\$107
Expansion of Freeway Service Patrols	\$26	\$26	\$28
Local Planning Grants	\$26	\$26	\$26
Total	\$4,705	\$4,763	\$4,854
Difference	-	\$58	\$149
Percent Increase	-	1.2%	3.2%

Source: Governor's Office, January 9, 2019; Encina Advisors

preliminary engineering, right of way and construction averaged 20 percent, 8 percent and 72 percent of project costs, respectively (Craighead, March 20, 2018).

For the construction-related categories of SB 1, we applied these preliminary engineering, right of way and construction percentages to the expenditures and associated each percentage with a 2-digit NAICS sector. We associated the operations-related expenditures and the local planning grants with separate 2-digit NAICS sectors. To account for pyramiding, we applied the 5 percent sales tax rate on the purchases of intermediate goods and services for these sectors as appropriate, and recalculated the category costs. We then applied the 5 percent tax rate to the final purchases of the estimated non-materials portion of the construction-related categories and to the expansion of freeway service patrols that are privately run.

The results are shown in Table 4.5 above. Table 4.5 shows that a 5 percent sales tax on services would increase annual costs for SB 1 funded activities by \$149 million in 2019-20 for state and local governments. That means a cost increase of 3.2 percent. Consequently, over 10 years, a sales tax on business services could potentially prevent \$1.5 billion of transportation-related projects from being completed.

Case Study 4: Small Business – Relles Florist

Relles Florist is a Sacramento institution located in the heart of Midtown. Opened in October 1946 by Ross Relles Sr., the small business provides arrangements of fresh-cut flowers to its customers, primarily in the greater Sacramento metropolitan region. The company emphasizes obtaining locally grown flowers

to the extent possible, but will source from all over the world. Relles Florist is now managed by Jim Relles, Ross's son, and employs multiple other family members as well.²⁶

Over the past few years, Relles Florist has been squeezed by financial pressures driven by both the marketplace and by government. The explosion of web retailers has created additional competition for the company. This has forced the company to look for ways to cut costs to keep prices down and maintain sales. At the same time the company has seen an increase in its overhead costs. For example state and local minimum wage laws – which so far have increased Sacramento's minimum wage from \$10.00 an hour in 2016 to \$11.75 an hour currently – have increased the company's costs. Despite the fact that most of the shop's 22 full-time employees already are paid more than minimum wage, any increase in the minimum has a cascading effect across all other salary levels.

Theoretically, Relles Florist should not be substantially impacted by a sales tax on services; as a company in the retail trade industry, the shop is not primarily a services provider and already collects and remits sales tax on its sales and delivery of fresh-cut flowers and arrangements. But could a sales tax on business services affect the financial health of Relles Florist? We reviewed the company's profit and loss statement for its most recent fiscal year, and found that 25 percent of its nearly \$1.5 million in business and operating expenses would be impacted by a sales tax on services (based on the taxed services identified in SB 993). This includes services that would directly be taxed, including delivery services, legal, accounting, advertising, website hosting, and payroll service fees. It also includes services that would become indirectly more expensive due to pyramiding, including auto repair and maintenance, laundry services, and parking.

For a sales tax on services going into effect in 2020, we estimate that such a tax would increase Relles Florist's business and operating expenses by nearly \$21,000 a year. This represents a 1.3 percent increase to the company's total expenses, but one that cannot necessarily be passed on to consumers given the competition in the industry. Jim Relles notes that he does not want to reduce staffing levels, but the tight margins mean the company does not have a lot of flexibility, so there might be nowhere else to cut costs.

²⁶ Information for this case study was gathered through an in-person interview with Jim Relles on April 26, 2019 and through Arrington, Debbie, "Sacramento's landmark Relles Florist celebrates 70 years of sweet success," *The Sacramento Bee*, October 17, 2016.

5. CONCLUSION

This report quantitatively tested three assertions made by proponents of a sales tax on services. These assertions are the following:

- Business services in California are untaxed economic activity, so that taxing these services would promote fairness;
- Sales and use taxes on business services would stabilize California's government revenue; and
- Taxing business services would not harm California's economic environment.

Our analysis found little support for advocates' assertions. First, we estimated that business services industries currently pay approximately \$22.2 billion in taxes to the State of California each year. This figure exceeds the taxes paid by other industries, and it reflects an elevated payment of taxes relative to business services' contribution to the state's economy.

Second, we found that a sales tax on business services would not significantly reduce General Fund volatility, based on an analysis over the 1997-98 to 2016-17 period and forward projections. This finding holds even if one assumes that economic activity is not depressed by the tax.

And third, we found that a sales tax on business services creates a number of problems for the California economy, including compounded cost increases across economic sectors, an uneven playing field for California companies, a tax on labor, and significant implementation costs. These problems put California companies at a competitive disadvantage, place a burden on small businesses in particular, and result in higher costs for consumers.

Importantly, we found that a sales tax on business services would create ripples across the California economy, resulting in a series of unintended consequences. From residential construction to K-12 school construction to SB 1 transportation infrastructure upgrades to small retailers, a sales tax on business services would raise costs in unexpected ways, reducing the purchasing power of both public and private dollars.

If policymakers are truly interested in reducing budget volatility in the state, other alternatives might be more apt. These include making California's existing sales tax system on goods more efficient, revisiting the structure of the state's personal income tax, and exploring a sales tax on personal services rather than business services. This report does not recommend any of these alternatives, rather it just notes that they likely would be more effective and less damaging.

SELECTED REFERENCES

- Ashmun, Maddy, "Housing Still Costs a Fortune in California. Will Gavin Newsom's Plan Fix That?," *Sacramento Bee*, February 1, 2019. As of February 1, 2019: <https://www.sacbee.com/news/politics-government/capitol-alert/article225213730.html>
- Auerbach, Alan J., "California's Future Tax System," *The California Journal of Politics & Policy*, Vol. 2, No. 3, 2010. As of February 7, 2019: <https://cloudfront.escholarship.org/dist/prd/content/qt1vs1z8hz/qt1vs1z8hz.pdf>
- Baker, Kermit, James Chu and Jennifer Riskus, *Designing the Construction Future: Reviewing the Performance and Extending the Applications of the AIA's Architecture Billings Index*, Washington, D.C.: The American Institute of Architects, 2014. As of February 7, 2019: http://aiad8.prod.acquia-sites.com/sites/default/files/2016-04/Designing-Construction-Future_3-14.pdf
- California Commission on Tax Policy in the New Economy, *Final Report of the California Commission on Tax Policy in the New Economy*, December 2003. As of January 31, 2019: <http://www.californiacityfinance.com/CaComTaxPolicyNewEcon2003.pdf>
- California Department of Finance (DoF), "Schedule 8 at 2018 Budget Act – Comparative Statement of Revenues," June 2018. As of February 7, 2019: http://www.ebudget.ca.gov/2018-19/pdf/Enacted/BudgetSummary/BS_SCH8.pdf
- California DoF, "Chart A: Historical Data – General Fund Budget Summary," January 2019. As of February 7, 2019: http://dof.ca.gov/budget/summary_schedules_charts/documents/Jan-2019/CHART-A.pdf
- California Employment Development Department, "California Unemployment Rate Rises to 4.2 Percent in December," News Release No. 19-106, January 18, 2019. As of February 20, 2019: https://www.edd.ca.gov/about_edd/pdf/urate201901.pdf
- California Governor's Office, *Governor's Budget Summary, 2018-19*, Sacramento: California Governor's Office, January 10, 2018. As of January 9, 2019: <http://www.ebudget.ca.gov/2018-19/pdf/BudgetSummary/FullBudgetSummary.pdf>
- California Governor's Office, *Governor's Budget Summary, 2019-20*, Sacramento: California Governor's Office, January 9, 2019. As of March 23, 2019: <http://www.ebudget.ca.gov/2019-20/pdf/BudgetSummary/FullBudgetSummary.pdf>
- California Legislative Analyst's Office (LAO), *Understanding California's Sales Tax*, Sacramento: LAO, May 2015. As of December 21, 2018: <https://lao.ca.gov/reports/2015/finance/sales-tax/understanding-sales-tax-050615.pdf>
- California LAO, *Volatility of the Personal Income Tax Base*, Sacramento: LAO, February 8, 2017. As of December 21, 2018: <https://lao.ca.gov/reports/2017/3548/Volatility-of-PIT-030817.pdf>
- California LAO, *Volatility of California's Personal Income Tax Structure*, Sacramento: LAO, September 28, 2017. As of December 21, 2018: <https://lao.ca.gov/reports/2017/3703/volatility-Cal-PIT-structure-092817.pdf>
- California LAO, *Building Reserves to Prepare for a Recession*, Sacramento: LAO, March 7, 2018. As of February 7, 2019: <https://lao.ca.gov/reports/2018/3769/prepare-for-recession-030718.pdf>
- California LAO, *California's Tax System: A Visual Guide*, Sacramento: LAO, April 12, 2018. As of February 7, 2019: <https://lao.ca.gov/reports/2018/3805/ca-tax-system-041218.pdf>
- California State Board of Equalization (BOE), "Staff Legislative Bill Analysis: Assembly Bill 2540 (Gatto)," Sacramento: BOE, March 7, 2012. As of January 9, 2019: <http://www.boe.ca.gov/legdiv/pdf/ServicesRevEstimate.pdf>

California BOE, *Estimate of Potential Revenue To Be Derived From Taxation Of Currently Non-taxable Services*, Sacramento: BOE, April 14, 2015. As of January 9, 2019:
<http://www.boe.ca.gov/legdiv/pdf/ServicesRevEstimate.pdf>

California BOE, "Fact Sheet: Sales Taxes on Services," Sacramento: BOE, 2015. As of January 9, 2019:
<http://www.boe.ca.gov/legdiv/pdf/Servicesfactsheet2015.pdf>

California State Controller Betty T. Yee and the Controller's Council of Economic Advisors on Tax Reform, *Comprehensive Tax Reform in California: A Contextual Framework*, June 2016. As of February 1, 2019:
https://www.sco.ca.gov/Files-EO/Comprehensive_Tax_Reform_in_California_A_Contextual_Framework_06_16.pdf

Cline, Robert, Andrew Phillips and Tom Neubig, *What's Wrong with Taxing Business Services: Adverse Effects from Existing and Proposed Sales Taxation of Business Investment and Services*, Washington, D.C.: Council on State Taxation, April 4, 2013. As of January 30, 2019:
<https://www.cost.org/globalassets/cost/state-tax-resources-pdf-pages/cost-studies-articles-reports/sales-taxation-of-services-and-business-inputs-study.pdf>

Commission on the 21st Century Economy (COTCE), *Report of the Commission on the 21st Century Economy*, September 2009. As of December 26, 2018:
http://www.cotce.ca.gov/documents/reports/documents/Commission_on_the_21st_Century_Economy-Final_Report.pdf

Craighead, Mary, *A Comparison of Highway Construction Costs in the Midwest and Nationally*, St. Paul: Midwest Economic Policy Institute, March 20, 2018. As of April 15, 2019:
<https://midwestepi.files.wordpress.com/2017/05/cost-per-lane-mile-nationally-and-in-the-midwest-updated-final.pdf>

Ford, Carmel, *Cost of Constructing a Home: Special Study by National Association of Home Builders Economics and Housing Policy Group*, Washington, D.C.: HousingEconomics.com, December 2017. As of February 6, 2019:
http://www.nahbclassic.org/fileUpload_details.aspx?contentTypeID=3&contentID=260013&subContentID=707961&channelID=311

Little Hoover Commission, *Level the Playing Field: Put California's Underground Economy Out of Business*, Report #226, March 2015. As of February 13, 2019:
<https://lhc.ca.gov/sites/lhc.ca.gov/files/Reports/226/Report226.pdf>

Mazerov, Michael, *Using Economic Census Data to Estimate the Revenue Impact of Taxing Services*, Washington, DC: Center on Budget and Policy Priorities, February 15, 2012. As of January 8, 2019:
<https://www.cbpp.org/sites/default/files/atoms/files/2-15-12sfp.pdf>

Nicolas Berggruen Institute, *A Blueprint to Renew California: Report and Recommendations Presented by the Think Long Committee for California*, November 2011. As of December 21, 2018:
https://36z59wrv543qd814533ma8z-wpengine.netdna-ssl.com/wp-content/uploads/2018/10/Blueprint_to_Renew_ca.pdf

Skelton, George, "As California's New Governor, Gavin Newsom Needs to Address What No One Wants to Talk About," *Los Angeles Times*, January 7, 2019. As of January 7, 2019:
<https://www.latimes.com/politics/la-pol-sac-skelton-gavin-newsom-public-pensions-tax-revenue-20190107-story.html>

U.S. Bureau of Economic Analysis, *Concepts and Methods of the U.S. National Income and Product Accounts*, Washington D.C.: U.S. Department of Commerce, November 2017. As of February 2, 2019:
<https://www.bea.gov/sites/default/files/methodologies/nipa-handbook-all-chapters.pdf>

U.S. Bureau of Economic Analysis, *The Use of Commodities by Industries*, Washington D.C.: U.S. Department of Commerce, 2017. As of February 13, 2019:
https://apps.bea.gov/iTable/iTable.cfm?reqid=52&step=102&isuri=1&table_list=4&aggregation=sum

APPENDIX A – Methodology for Calculating California’s Taxable Base for Business Services

We calculated California’s taxable services base using the following six-step methodology:

- Obtaining the State Board of Equalization’s (BOE’s) taxable services base estimates for the 2015-16 fiscal year;
- Removing services revenue from exempted industries;
- Removing services revenue from small businesses;
- Adjusting services revenue to account for exported and imported services;
- Removing services revenue consumed by federal, state and local governments; and
- Applying industry growth factors for the fiscal years 1997-98 through 2024-25.

These steps are described below in more detail:

First, we used the BOE’s estimates of California’s taxable services for the 2015-16 fiscal year as a starting point. The BOE developed its estimates in 2015 due to a request by Senator Bob Hertzberg to calculate the value of existing untaxed services for legislation under consideration at the time (SB 8). In developing the estimates, BOE followed the methodology prescribed by the Center on Budget and Policy Priorities (February 15, 2012) which involved: listing the California service industries by 5-digit or 6-digit North American Industry Classification System (NAICS) codes²⁷; obtaining sales receipt data for these industries from the U.S. Census Bureau’s 2012 Economic Census, which was the most recent data available; subtracting out any taxable expenses for 2012 from these industries by North American Product Classification System (NAPCS) code; and applying growth factors to the net receipts to extrapolate these figures to 2015-16. Because this analysis required expert judgment regarding the tax treatment of individual categories of receipts and expenses, and because the U.S. Census Bureau’s 2017 Economic Census data has not yet been made public, the BOE estimates for 2015-16 are the most credible data currently available.

Second, we subtracted from BOE’s estimates of California’s taxable services the net sales receipts for industries that were explicitly exempted in SB 993. These exemptions pertained to education services (NAICS Subsector 611); health care and assisted living services (Subsectors 621 to 623, inclusive); child care services (Subsector 624410); residential building construction (Subsector 2361); wholesale trade (Sector 42); automotive parts, accessories, and tire stores (Subsector 4413); the Postal Service (Subsector 491); arts, entertainment, and recreation services (Sector 71); food services and drinking places (Subsector 722); all other traveler accommodation services (Subsector 721199); and other services except public administration (Sector 81). SB 993 also exempted services involving interest and rent, so we removed individual industries within the financial services area (Sector 52) and the real estate and leasing area (Sector 53), respectively, as appropriate.

²⁷ The BOE excluded those service industries that were specifically protected from taxation in the California Constitution such as utilities and insurance.

Third, SB993 exempted services provided by very small businesses, specifically those making less than \$100,000. Accordingly, we estimated the net sales receipts for small businesses by analyzing the BOE's estimates of non-employer revenue that were used to calculate California's taxable services for 2015-16. We used the non-employer revenue by industry and the number of California firms by industry that were provided by the BOE to calculate the average net receipts per industry. We then subtracted from BOE's estimates of California's taxable services the non-employer net receipts for industries where the non-employer net receipts were projected to be less than \$100,000 by 2019-20, when SB 993 would have gone into effect. We describe the growth factors used for these projections below.

Fourth, the BOE's estimates of California's taxable services represented revenues of California service providers. Some of these revenues were obtained for services provided to out-of-state customers (i.e., exported services), and this portion of revenues would not be subject to a California sales tax. Additionally, these revenues do not reflect services provided by out-of-state companies to California customers (i.e., imported services) that would be subject to a sales or use tax. Consequently, we controlled for exported and imported services for each industry. We adjusted the BOE's estimates of taxable services using IMPLAN's domestic supply/demand ratios to balance out the supply and demand of services in California. IMPLAN's domestic supply/demand ratios come from its trade model and show which services are overproduced or underproduced in California relative to the consumption amounts in the state. For each industry, we applied these ratios to the amount of taxable services; for some industries these supply/demand ratios decreased the amount of taxable services while for other industries they increased it.

Fifth, we then removed the revenue of services that are consumed by federal, state and local governments where applicable. The federal government is not required to pay sales and use taxes on its purchases, while state and local governments generally would be required to pay sales and use taxes except under certain circumstances. (Some of the scenarios that we analyze specifically exempt state and local governments, however.) From IMPLAN, we obtained the total gross commodity demand for each industry from its commodity summary report. In IMPLAN, the total gross commodity demand is the sum of intermediate commodity demand (i.e., demand by industries) and institutional commodity demand (i.e., demand from households, government, capital and inventory). We used IMPLAN's institution local commodity demand report to obtain the value of demand for each industry by federal, state and local governments and used these values to calculate the percentage of total gross commodity demand that went to government. We applied these percentages to our estimates of California's taxable services base accordingly.

And sixth, we applied growth factors to each industry. The previous four steps effectively calculated a modified taxable services base for California for 2015-16, and we needed to extrapolate this amount historically and to the present day for analysis. We did so by aggregating the net receipts for the 5-digit/6-digit NAICS industries into their 2-digit sectors. We then obtained historical gross state product (GSP) data for California spanning 1997 to 2017 from the U.S. Bureau of Economic Analysis. This GSP data was broken down into its 2-digit NAICS constituents. We applied the annual growth rates over this period for each 2-digit sector to the corresponding net receipts for services to estimate how the taxable services base changed over this period. To extrapolate from 2016-17 to the present day, we calculated the compound annual growth rate (CAGR) for each 2-digit GSP sector over the 1997 to 2017 timeframe and applied these factors accordingly.

APPENDIX B – California’s Estimated Taxable Services Base for Business Services, 2018-19

**Table B.1: California’s Estimated Taxable Services Base
for Business Services, 2018-19
(In Millions)**

NAICS 2-Digit Sector	Industry Description	Taxable Services Base
11	Agriculture, forestry, fishing, and hunting	\$765.4
21	Mining, quarrying, and oil and gas extraction	\$8,591.6
23	Construction	\$83,059.7
44-45	Retail trade	\$6,008.5
48-49	Transportation and warehousing	\$125,860.4
51	Information	\$81,002.0
52	Finance and insurance	\$111,795.7
53	Real estate and rental and leasing	\$46,015.4
54	Professional, scientific, and technical services	\$186,881.6
56	Administrative and support and waste management and remediation services	\$104,362.5
62	Health care and social assistance	\$8,046.2
72	Accommodation and food services	\$35,965.2
	Total	\$798,354.2

Source: Encina Advisors

Note: Totals may not sum due to rounding.

Table B.2: Industries Included Under Business Services

NAICS 2-Digit Sector	IMPLAN Industry	Description	NAICS 2-Digit Sector	IMPLAN Industry	Description
11	19	Support activities for agriculture and forestry	52	433	Monetary authorities and depository credit intermediation
21	37	Drilling oil and gas wells	52	434	Nondepository credit intermediation and related activities
21	38	Support activities for oil and gas operations	52	435	Securities and commodity contracts intermediation and brokerage
21	39	Metal mining services	52	436	Other financial investment activities
23	54	Construction of new power and communication structures	53	440	Real estate
23	56	Construction of new highways and streets	53	442	Automotive equipment rental and leasing
23	57	Construction of new commercial structures, including farm structures	53	443	General and consumer goods rental except video tapes and discs
23	58	Construction of other new nonresidential structures	53	445	Commercial and industrial machinery and equipment rental and leasing
23	59	Construction of new single-family residential structures	53	446	Lessors of nonfinancial intangible assets
23	60	Construction of new multifamily residential structures	54	447	Legal services
23	62	Maintenance and repair construction of nonresidential structures	54	448	Accounting, tax preparation, bookkeeping, and payroll services
44	396	Retail - Motor vehicle and parts dealers	54	449	Architectural, engineering, and related services
48	408	Air transportation	54	450	Specialized design services
48	410	Water transportation	54	451	Custom computer programming services
48	411	Truck transportation	54	454	Management consulting services
48	412	Transit and ground passenger transportation	54	455	Environmental and other technical consulting services
48	413	Pipeline transportation	54	456	Scientific research and development services
48	414	Scenic and sightseeing transportation and support activities for transportation	54	457	Advertising, public relations, and related services
49	415	Couriers and messengers	54	458	Photographic services
49	416	Warehousing and storage	54	459	Veterinary services
51	417	Newspaper publishers	54	460	Marketing research and all other miscellaneous professional, scientific, and technical services
51	418	Periodical publishers	56	462	Office administrative services
51	419	Book publishers	56	463	Facilities support services
51	420	Directory, mailing list, and other publishers	56	464	Employment services
51	421	Greeting card publishing	56	465	Business support services
51	422	Software publishers	56	466	Travel arrangement and reservation services
51	424	Sound recording industries	56	467	Investigation and security services
51	425	Radio and television broadcasting	56	468	Services to buildings
51	426	Cable and other subscription programming	56	469	Landscape and horticultural services
51	427	Wired telecommunications carriers	56	470	Other support services
51	428	Wireless telecommunications carriers (except satellite)	56	471	Waste management and remediation services
51	429	Satellite, telecommunications resellers, and all other telecommunications	62	485	Individual and family services
51	430	Data processing, hosting, and related services	62	486	Community food, housing, and other relief services, including rehabilitation services
51	431	News syndicates, libraries, archives and all other information services	72	499	Hotels and motels, including casino hotels
51	432	Internet publishing and broadcasting and web search portals	72	500	Other accommodations

Source: IMPLAN

APPENDIX C – Intermediate Commodities Consumed by Industrial Sector

**Table C.1: Intermediate Commodities Consumed by Industrial Sector,
United States, 2017
(In Millions of Dollars)**

Commodities	Industrial Sector						
	23 – Construction	48-49 – Transportation and warehousing	51 – Information	52 – Finance and Insurance	53 – Real estate and rental and leasing	54 – Professional, scientific and technical	56 – Administrative and support services
Construction	226	5,574	2,302	4,733	152,859	757	413
Air transportation	278	3,261	3,460	7,717	8,170	8,626	6,208
Rail transportation	1	4,167	238	158	12	424	120
Water transportation	8	3	1	-	8	1,078	17
Truck transportation	-	7,088	293	34	89	1,169	228
Transit and ground passenger trans.	523	534	1,897	4,123	4,031	6,041	3,126
Other trans. and support activities	-	94,698	5,403	3,881	1,881	14,282	4,041
Warehousing and storage	-	20,978	1,670	99	400	1,309	1,515
Publishing industries, except internet	523	676	16,746	1,590	784	7,594	2,055
Motion picture and sound recording	-	69	63,422	39	659	2,400	47
Broadcasting and telecommunications	6,940	9,746	116,979	22,997	19,404	24,298	12,946
Data processing, internet publishing	1,173	1,234	16,978	15,129	6,013	24,783	21,936
Fed. Res. banks, credit intermediation	7,523	22,763	9,794	94,423	182,404	27,476	9,862
Securities, commodity contracts	1,938	12,716	1,202	168,978	6,225	4,544	1,960
Insurance carriers	486	15,762	4,537	449,710	64,477	14,183	8,037
Funds, trusts, and other fin. vehicles	-	-	-	18,861	-	-	-
Other real estate	20,610	29,340	36,400	114,014	143,223	82,707	19,421
Rental and leasing services	20,886	29,065	24,418	20,486	9,533	23,452	8,603
Legal services	6,164	2,572	11,609	37,899	22,716	21,604	8,131
Computer systems design	4,843	3,445	22,876	23,034	3,091	31,042	12,158
Misc. prof., scientific, and tech. svcs.	54,708	17,333	105,076	136,531	121,033	169,884	48,125
Administrative and support services	9,758	42,358	56,043	51,435	134,544	97,999	70,894
Waste mgmt. & remediation services	2,953	2,589	521	3,213	13,672	2,129	10,827
Educational services	7	204	216	45	-	145	1,229
Ambulatory health care services	-	-	-	-	-	96	120
Perf. arts, spectator sports, museums	146	876	31,855	2,660	6,163	6,606	2,254
Amusements, gambling, and rec.	49	4	129	304	291	411	378
Accommodation	433	971	4,393	10,298	10,149	11,710	7,901
Food services and drinking places	485	9,267	4,508	17,162	31,756	26,113	15,321
Other services, except government	8,062	18,244	6,667	20,204	17,193	12,028	12,757
Government/other/used	4,168	36,111	12,761	51,377	7,894	10,171	4,345
Other goods, services	600,389	155,149	125,233	56,295	193,033	147,000	113,759
Total Intermediate	753,280	546,797	687,627	1,337,429	1,161,707	782,061	408,734
Value Added (basic prices)	779,727	586,782	1,014,293	1,436,790	2,598,763	1,422,005	599,167
Total industry output (basic prices)	1,533,008	1,133,579	1,701,920	2,774,220	3,760,470	2,204,066	1,007,901
Value Added (producer prices)	781,413	608,735	1,050,766	1,465,909	2,591,220	1,449,994	606,974

Source: U.S. Bureau of Economic Analysis, The Use of Commodities by Industries, 2017