Taxing Commercial and Industrial Property at Full Market Value

An Economic Impact Assessment

MARCH 2020

INTELLIGENCE THAT WORKS

BRG

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California voters adopted the state's current property tax system when they approved Proposition 13 in 1978. Since 1978, several proposals have sought to change the rules governing how commercial and industrial properties are valued for property tax purposes. These proposals would have the effect of increasing by approximately 75% the property taxes both large and small businesses pay.

Summary

Proponents of treating business property differently for assessment purposes focus on the additional government spending that the tax increase would make possible. An estimate of the additional government spending that would be allowed by one recent proposal is $10.4 billion per year. Of this amount, about $4 billion would be spent by K–12 schools and community colleges, and $6 billion would be spent by cities, counties, and special districts other than schools.

Proposals to increase property taxes on commercial and industrial properties are known as "split-roll" proposals, because they would split the assessment roll based on how a property is used. In evaluating such proposals, it is important to consider both the effects of increased government spending and how an increase in taxes on California businesses would affect the state's economy, the number of private-sector jobs, and the income of California residents.

In isolation, a major increase in property taxes would reduce private-sector employment. Widely held principles of economics and numerous empirical studies have concluded that increases in property taxes reduce new business formation, personal income, industrial output, and employment. These studies also have concluded that higher property taxes increase the likelihood of business closures and the likelihood that businesses will move or expand their operations outside the jurisdiction in which the taxes are levied. At least one study also has found that when property taxes on commercial property are raised, businesses owned by women and minority entrepreneurs are disproportionately affected.

This paper reports the results of our analysis regarding the likely effect on income and employment in California that would result from changing the Proposition 13 property tax rules to require regular reassessment of commercial and industrial property at full market value. Our estimates build on the findings of published research and are derived from a widely used, well-respected commercial economic model of the state's economy (IMPLAN).

Our principal findings regarding the economic impact of a reassessment of full market value of commercial and industrial properties can be summarized as follows:

1. Fewer private-sector jobs. California businesses would react to the 75% increase in property taxes by shedding 120,000 jobs. These job losses would result from (a) marginal firms going out of business, (b) some firms shrinking the size of their operations and reducing the number of people they employ, and (c) some firms moving their operations from California to other states.

2. Disproportionate impact on women- and minority-owned firms. Women- and minority-owned businesses would be most severely affected by the higher costs resulting from the increase in property taxes because, according to the US Census Bureau, a larger percentage of these businesses (e.g., 50% of black-owned businesses) are not profitable and

would have no way to absorb the higher costs unless competitive forces allow them to raise the prices they charge consumers.

3. Shift in composition of state workforce. The loss of private-sector jobs caused by the tax increase would be offset partially or fully by increased government spending. The private sector would lose 120,000 jobs directly as a result of the increased property taxes on business. The model predicts that the public sector would expand by 66,000 jobs. Because increased government spending would spur some private-sector hiring, the model estimates the net private-sector job loss to be 45,000 jobs. However, the increase in public-sector jobs would be smaller if school districts and local governments used the additional property tax money to raise teacher and government employee salaries, rather than to expand services.

4. Displaced workers are unlikely to qualify for the new government jobs. We estimate that the proposed initiative's net effect on employment in California would be nominal, yielding perhaps as many as 21,000 additional jobs. There would, however, be a mismatch between the private-sector workers who lose their jobs as a result of the Initiative and the skills required for the new government jobs. For example, it is unlikely that many workers displaced from dry-cleaning establishments, restaurants, and small retail shops would qualify for the new jobs created in K–12 schools and community colleges.

5. California's economy would shrink modestly. Our economic model finds that the net impact of the property tax increase would be a $12.5 billion decrease in California's gross state product.

6. Consumers would pay more for goods and services purchased in California. Brick-and-mortar businesses, including dry cleaners, restaurants, and beauty salons, that do not compete with online or out-of-state firms would have an incentive—and in many cases, the ability—to pass along the increase in their property taxes to consumers, in the form of higher prices. The available data, however, do not allow us to estimate the additional amount that consumers would have to pay for the products and services they buy if property taxes on businesses are increased.

7. Local governments are more likely to favor commercial/industrial development over housing. Adoption of a

split-roll system for assessing taxable property would increase incentives for local governments to approve commercial and industrial development, rather than housing development, because the former would generate more revenue for local governments to spend. Strengthening the incentive for "economic zoning" may exacerbate California's housing shortage and affordability problems.

The estimates of job losses and reduced economic output summarized above are what voters can expect if business owners and investors react to the increase in property taxes as they have reacted to cost increases of the same magnitude in the past. Our analysis suggests, however, that the adverse effect of a split-roll system on private-sector jobs and the state's economy is likely to be greater—perhaps significantly greater—than our economic model predicts.

Investors and business owners are likely to evaluate a property tax increase in the context of California's perceived business climate relative to the business climate in other states. According to Ernst & Young (2019, p. 2), "On average, [California] businesses continue to pay more in state and local taxes than they receive in benefits. Businesses paid $3.30 of taxes for every dollar of government spending benefiting businesses, on average, assuming that in-state education spending does not benefit in-state businesses. Using an alternate assumption—that half of in-state education spending benefits in-state businesses—results in businesses paying $1.16 for every dollar of government spending benefiting businesses." Given California's current ranking by The Tax Foundation as the state with the third-worst business tax climate in the nation, and given the top-10 rankings of two bordering states—Nevada and Oregon—it would be more likely that investors and business owners would respond to a property tax increase by shifting jobs out of the state.

The available data do not allow us to quantify the potential effects of this factor.

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1 Introduction

On October 15, 2018, the California Secretary of State determined that Initiative #17-0055, "California Tax on Commercial and Industrial Properties for Education and Local Government Funding Initiative (2020)" (Initiative), would be eligible to appear on the 2020 California state ballot. On August 13, 2019, the sponsors of that measure filed a new version, Initiative #19-0008, that includes similar provisions that would amend the California Constitution to increase property taxes on businesses by causing certain commercial and industrial properties to be taxed based on their market values.[1] The proponents indicated they will collect signatures to qualify the new version for the November 2020 ballot, to replace the original measure.

If approved by voters, either initiative would fundamentally change the property tax system that California voters established in 1978 when they approved Proposition 13 with an overwhelming vote.[2] Proposition 13 limits the real estate property tax rate to 1% of the assessed value and caps increases of property tax assessments of all real estate properties, including residential and commercial properties, at 2% per year (unless there is new construction or a change in ownership, either of which would trigger reassessment). Under split-roll proposals, residential properties would continue to be assessed for tax purposes based on their acquisition value (typically the purchase price) plus an annual inflation adjustment capped at 2%, but certain commercial and industrial properties would be assessed at their market values.

Since passage of Proposition 13 in 1978, nearly two dozen proposals have been introduced to enact a split-roll assessment system. The State Board of Equalization (1981) uses this definition of a "split roll":

> [T]he practice of treating two or more property types different[ly] for property tax purposes. The property types are usually broad in nature, such as residential, agricultural, or commercial/industrial. The classical example of a split roll involves dividing the property tax assessment roll, which is the document showing the value of all properties subject to property taxation, by property type and assessing or valuing each type at a different percentage of full market value.

In 2019–2020, owners of real property in California are expected to pay $74 billion in property taxes (Governor of the State of California, 2019, p. 172), which represents about 2.47% of California's 2018 gross domestic product (GDP). Estimates published by the California Legislative Analyst's Office (LAO) indicate that commercial and industrial real estate properties contribute 23% of total property tax revenues.[3] The LAO also estimates that assessment of business and commercial property at full market value would increase the property taxes paid by commercial and industrial properties by, on average, 75%.

This report seeks to analyze the potential economic impact of changing the current Proposition 13 property tax structure so that commercial and industrial property is regularly reassessed at full market value. The next section provides an overview of the current voter-approved property tax system in California and describes how split-roll proposals would change this system. Section 3 reviews the published research on property taxes and the split roll. Section 4 presents the results of an economic impact study that takes into account both the increase in taxes paid by small and large businesses and the increased government spending that would result from a split-roll assessment regime. Section 5 discusses how businesses would change their behavior in response to the increase in property taxes and why it is difficult for an economic model to quantify the effects of these changes. Section 6 presents our conclusions.

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1 "The California Schools and Local Communities Funding Act of 2020," Active Statewide Initiative Measures; see https://www.oag.ca.gov/initiatives/active-measures, accessed on September 6, 2019.

2 The vote was 65% in favor of Proposition 13 (see https://www.ppic.org/publication/proposition-13-40-years-later/5, accessed July 15, 2019).

3 Total assessed value of commercial and industrial real estate properties in 2017–2018 was $1.6 trillion, yielding an estimated $16 billion in property taxes. Letter from Mark Durham, Chief, Legislative Research & Statistics Division, "4-R Act Equalization Ratio – May 2019 Board Meeting" (May 7, 2019). Accessed at on July 3, 2019.

2 The Current Property Tax System and Split-Roll Proposals

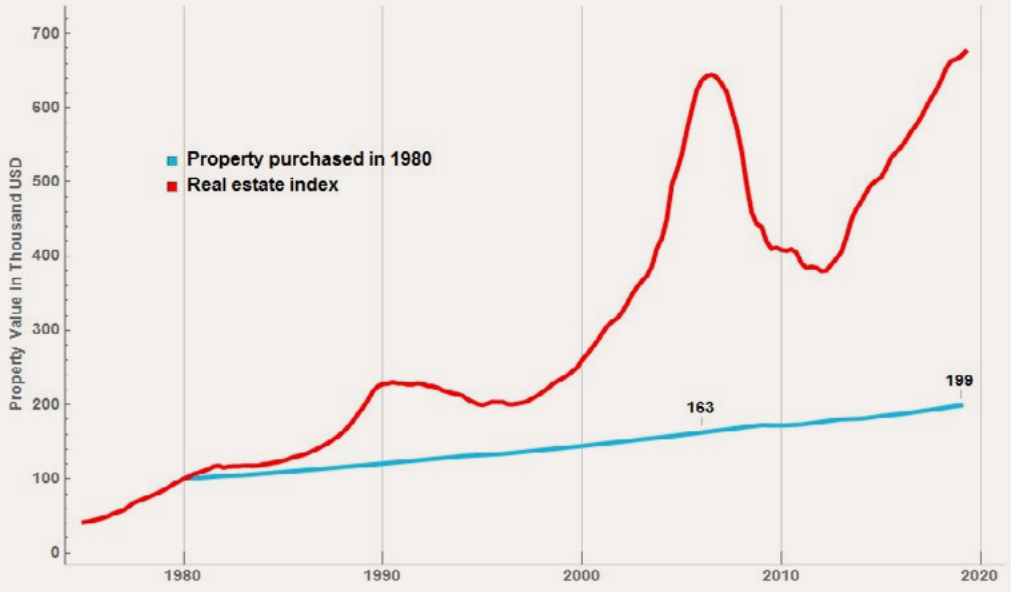
2.1 *The Current Property Tax System*

California's property tax structure generates revenue primarily from the so-called "1%" property tax. The rules governing the "1%" property tax have been in place largely since 1978, when the voters overwhelmingly approved Proposition 13 to amend the California Constitution. Under Proposition 13, all owners of owner-occupied residential properties, investment and vacation residential properties, commercial, and industrial properties are subject to the "1%" property tax.

The amount of property taxes paid by each real property owner pursuant to the "1%" tax does not depend on how the property is used. Rather, it depends on: (1) the assessed value of the property the last time there was a change in ownership (generally the purchase price), (2) the amount of new construction on the property,[4] and (3) inflation adjustments since the date of purchase, at a maximum of 2% per year.

In the first year, the property owner must pay an amount equal to 1% of the purchase price. In each subsequent year, the assessed value of the property may be increased by up to 2%. The higher assessed value then is multiplied by 1% to determine the amount due from the "1%" tax. When ownership of the property changes (e.g., the property is sold), the property is reassessed at the sale price, and the assessment can increase up to 2% in subsequent years.[5] Figure 1 illustrates how the property tax increases over time for a hypothetical property sold in 1980, and shows how the assessed value of the property can diverge from the property's market value.

Figure 1 Comparison of Assessed Value and Market Value



Source: BRG analysis based on LAO, Understanding California's Property Taxes, November 29, 2012, p. 11, and U.S. Federal Housing Finance Agency, All-Transactions House Price Index for California [CASTHPI], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CASTHPI, November 13, 2019.

4 "Any new construction that adds value to the property will generate a one-time supplemental assessment that represents the market value of the new improvements at the completion of construction. The supplemental assessment accounts for the difference between the value existing on the assessment roll as of the most recent January 1 lien date and the new value after completion." After the one-time supplemental assessment, the value of the new construction will be added to the base-year value for subsequent assessment periods. (See https://www.sccassessor.org/index.php/property-information/business-owner/new-construction-remodeling-repair, last accessed on August 11, 2019).

5 For example, for the 2010–2011 assessment roll, assessors were instructed to apply a base-year value change of –0.24% (https://www.boe.ca.gov/proptaxes/pdf/lta17048.pdf, last accessed on August 11, 2019).

Under the property tax system established by Proposition 13, two properties, each with the same market value, may be taxed differently in the same year. A property sold multiple times since 1978 also may have an assessed value closer to the current market value than may a property that has not sold since 1978. All else being equal, properties sold less frequently will contribute less to the total property tax base than will properties that are sold more frequently.

Property taxes are local taxes. That is, the revenues collected are made available for use by cities, counties, special districts, and schools. Nevertheless, state government has a significant fiscal interest in both how much property tax revenue is collected and how the funds are distributed. Their fiscal interest is due to the state's role in the education finance system. As noted by Taylor (2012, p. 18):

> Each K-12 district receives 'revenue limit' funding—the largest source of funding for districts—from the combination of local property tax revenue under the 1% rate and state resources. Thus, if a K-12 district's local property tax revenue is not sufficient to meet its revenue limit, the state provides additional funds. Community colleges have a similar financing system, in which each district receives apportionment funding from local property tax revenue, student fees, and state resources.

In fiscal year 2018–2019, approximately 42% of property tax collections were used to fund schools, while 58% were used to support city, county, and special district operations (Governor of the State of California, 2019, p. 170). In fiscal year 2019–2020, again, approximately 42% of property tax revenues ($31 billion) is expected to go to K–14 schools.[6]

2.2 *Split-Roll Proposals*

On November 3, 2020, California voters will have the opportunity to vote on an initiative that would change the property tax system established by the voters when they approved Proposition 13 in 1978. Two versions of the initiative have been presented, each proposing three main changes to the current Proposition 13 property tax regime:

1. Regularly reassess certain commercial and industry property at market values
2. Exempt lower-value business personal property from taxation
3. Allocate new revenue to local governments and schools[7]

The first change requires commercial and industrial properties, as well as vacant land not intended for housing or commercial agriculture, to be taxed based on their market values.[8] As a result, the proposals would "split" how owner-occupied residential properties are taxed from how commercial and industrial properties are taxed.[9] An owner-occupied residential property would continue to be taxed based on the property's assessed value when it was last sold, plus annual adjustments capped at 2%, whereas certain commercial and industrial properties would be taxed based on the properties' market values. Assessors employed by local governments would estimate these market values annually.

The November 2020 proposals would exempt some commercial property from being assessed at market value. If a taxpayer owns property in California that has an aggregate value of less than $2 million and the taxpayer owns and

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6 https://www.oag.ca.gov/initiatives/active-measures, accessed on September 6, 2019.

7 Taylor, M. (2018). Letter to Attorney General Xavier Becerra, Legislative Analyst's Office ("LAO Letter").

8 LAO Letter, p. 2.

9 Split-roll proponents characterize the current method for valuing commercial and industrial properties as a "loophole" (Section 2(d) of Initiative 17-0055), because it allows "commercial and industrial property owners [to] avoid over $11 billion in local property taxes" (Section 2(e)). This characterization may concern homeowners and renters, because the same valuation method is used to value residential property, and this method allows owners of such property to avoid local property taxes in the same way as commercial properties.

It is not clear what the proponents' rationale is for deeming the current valuation method to be a "loophole." As commonly used, the term "loophole" refers to an unintended provision of law that allows some taxpayers to avoid paying taxes. (See, for example, Dictionary.com's definition of "tax loophole": "A provision in the laws governing taxation that allows people to reduce their taxes. The term has the connotation of an unintentional omission or obscurity in the law that allows the reduction of tax liability to a point below that intended by the framers of the law.") Not only did Proposition 13 make clear that it applied to all real property subject to property taxation; the arguments offered by opponents of the measure stressed the fact that it would provide "tax relief to business, industrial property owners" ("California Voter Pamphlet," June 6, 1978). Initiative #19-0008 has removed the reference to loopholes and instead claims that commercial and industrial properties are underassessed.

operates a business "on a majority of the real property,"[10] such property would not be reassessed under one of the proposals. The other measure includes an exemption if a taxpayer owns property in California with an aggregate market value of less than $3 million. Agricultural properties and non-owner-occupied residential properties (e.g., apartment buildings) also would not be reassessed based on their market values.

The second change to the property tax system proposed by the initiatives seeks to offset some of the negative effects caused by the higher property taxes on commercial and industrial properties. The initiatives exempt from taxation the first $500,000 of business tangible personal property (e.g., equipment and fixtures) for all businesses. Further, businesses with 50 or fewer employees would not be subject to business tangible personal property tax, if they meet various qualifications.[11]

3 Review of Published Research

Economic researchers regularly study property taxes and their economic impacts on the jurisdictions that impose these taxes. In this section, we summarize findings from the research regarding the economic effects of property taxes, past split-roll proposals, and current split-roll proposals.

Previous research suggests that the revenue raised by splitting the property tax roll would range from $4 billion to $12 billion, with the LAO estimate of $6.5 billion to $10.5 billion representing the approximate midpoint of these estimates. The more-substantive disagreement among researchers pertains to the likely net economic impact of a split-roll system. That is, will the California economy be better or worse off after accounting for the impact of increased education and government spending (and derivative effects), as well as the negative effects of increased taxes on small and large businesses (and derivative effects)?

Quantitative studies (including this one) indicate that the net effect of implementing a split roll for property tax assessments would be a reduction in state GDP and a significant reduction in private-sector jobs. More qualitative assessments predict that the net impact of a split roll on state GDP and jobs would range from a reduction to a modest benefit. Again, the LAO takes a middle-ground position, labeling the net economic impact of the current proposals to be "uncertain."[12]

3.1 *Economic Impact of Raising Property Taxes: Literature Review*

Basic principles of economics support the view that any factor affecting business profitability will influence decisions regarding business location and expansion (Wu, 2010). These decisions, in turn, directly affect local economic development.

Because local property taxes directly affect business profitability, an increase in these taxes has the potential to reduce the rate of economic growth within a community or region. Extensive research provides empirical support for this hypothesis. Generally, this research shows that property taxes negatively affect business location, new business formation, employment, and industrial output. As a result of these findings, there is a consensus among economists that taxes do, indeed, matter for economic development (Phillips & Goss, 1995).

This consensus initially was documented by Bartik (1991), who reviewed a number of studies that estimated the long-run elasticity of business activity given a change in state and local taxes. Bartik found that empirical research estimated the elasticity to be between –0.1 and –0.6 for studies focusing on interstate or intermetropolitan business activity. That is, he found that a 1% increase in state and local taxes will decrease business activity by 0.1% to 0.6%.

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10 Section 7 of the proposed initiative.

11 The initiative indicates that this change "would eliminate the tax on equipment and fixtures for about 90 percent of all California businesses." (Funding for Schools & Communities Act, Section 3(h)).

12 LAO Letter, p. 3.

Bartik's conclusion was reaffirmed by Phillips and Goss (1995), who performed a meta-analysis of the studies originally reviewed by Bartik that allowed for increased precision in estimating tax elasticity. Their estimates support Bartik's view that state and local taxes adversely affect business activity, but they found the elasticity to be more negative than Bartik's –0.1% to –0.6%. Philips and Goss concluded that state and local taxes were more harmful to business activity than previously thought.

More recently, Giroud and Rauh (2019) analyzed the effect of state corporate taxation on business activity, using a sample of more than 27 million establishments of US firms with activities in more than one state. They found that increases in state taxes on corporations had a negative impact on employment at existing firms by incenting firms to shift operations to other states. Though Giroud and Rauh did not analyze local property taxes, their findings support the conclusions reached by other scholars that taxes affect decisions by businesses on where to locate or expand.

Other recent research has analyzed the impact of property taxes on the rate of economic development within a given state. For example, Wu (2010) investigated the effect of shifting the aggregate property tax burden away from residential properties and toward commercial and industrial properties. He found that such a shift, which increased the effective tax rate on business, affected business location. Enami, Reynolds, and Rohlin (2018) also found that changes in property taxes affect business location decisions. Their research, however, indicates that the adverse effect shows up primarily as a reduction in the rate of new business formations and an increase in the out-migration of firms, rather than as an increase in the number of existing firms going out of business.

Findings similar to Enami et al. (2018) have appeared in other scholarly research. For example, although Plaut and Pluta (1983) did not find local taxation to affect establishment-level employment growth in Maine, they concluded that "local fiscal policy affects aggregate employment change largely through business openings and closures, and less through the expansions and contractions of existing businesses" (Plaut & Pluta, 1983, pp. 59–119). Dye, McGuire, and Merriman (2001) studied instances in which commercial and industrial property is assessed at higher effective rates than residential property on an intrametropolitan level and found that this disparity had a statistically significant negative impact on employment.

Though these studies did not focus on interstate effects of an increase in property taxes on commercial and industrial property—the scope relevant for the current proposals—their findings have implications for California counties near other states.

We did not find scholarly research that analyzed the effect of an increase in property taxes on commercial and industrial property based on whether the state was perceived as having a favorable or unfavorable business climate. It is likely, however, that the effect would be more benign in a state regarded as business friendly and more adverse in a state regarded as not business friendly. If such a relationship exists, a split roll would have a more detrimental effect on California's economy and employment levels than the effect found by Bartik, Giroud and Rauh, Wu, and others, given the perceived unfavorable business climate in the state. For example, the 2020 Tax Foundation State Business Tax Climate Index rankings (Walczak, 2019) deemed California to have the third-worst business tax climate in the nation, ranking it 48th out of 50 states. In contrast, two bordering states—Nevada and Oregon—were among the 10 states with the best business tax climates.

3.2 *Review of Selected Studies on the Economic Impact of a Split Roll*

In this section, we review several studies that consider the economic impact of a split roll in California. It is important to keep in mind, however, that the split roll analyzed in some of these studies may differ from the current proposals.

3.2.1 Hamm and Alberro Study (2008)

In 2008, Dr. William Hamm, a former California Legislative Analyst, and Dr. Jose Alberro estimated the impact of a split-roll proposal on employment and net private investment, using the State of California's Dynamic Revenue Analysis Model (DRAM). The DRAM was developed by the California Department of Finance and the University of California at Berkeley to enable policymakers to analyze the economic impact of policy changes while taking into account behavioral changes.

The study first estimated tax revenue gains using data from the California State Board of Equalization that summarized the state-level disparity ratio between assessed and market value for two classes of property, owner-occupied residential and

commercial/industrial. The authors also assumed that a split-roll tax system would raise to market value the assessed value of all property other than owner-occupied residential. Hamm and Alberro found that adoption of a split roll would result in the loss of 86,000 to 152,400 jobs. They also found that adoption of a split-roll tax system would reduce net private investment by $2 billion. The researchers noted that the adverse economic impact would be felt disproportionately by small businesses, which are more likely to rent, rather than own, the property occupied by their businesses.[13]

3.2.2 Legislative Analyst's Office (2018 and 2019)

The LAO performed an analysis of the first version of the current proposal, consistent with its obligations under Elections Code Section 9005. The LAO set forth the results of its analysis in a letter to the California Attorney General dated February 5, 2018.[14] The LAO estimated that the initiative, if approved, would increase annual property tax revenues by $6.5 billion to $10.5 billion. A portion of these revenues would be used to offset decreased income tax revenues and increased county costs for property tax administration. The LAO estimated that these offsets would total several hundred million dollars. The remaining $6 billion to $10 billion in new property tax revenues would be allocated to local governments and education. Consistent with the academic literature, LAO noted that increased property taxes in California may affect businesses' decisions, including whether to continue operating or to expand in the state. The LAO concluded that "overall, the measure's effect on the health of the state's economy is uncertain."[15] In May 2019, the LAO estimated that the total assessed value of commercial and industrial properties across all counties in California is $1.646 trillion, while the market value of these properties in 2017–2018 is $2.883 trillion.[16] Hence, a split roll could increase tax revenues by up to $12.3 billion (minus any exemptions)—a tax increase of approximately 75%.

3.2.3 California Assessors' Association White Paper (2019)

The California Assessors' Association retained Capitol Matrix Consulting (CMC) to review the results of a survey of assessors regarding a "generic" split-roll proposal.[17,18] The analysis focused on the effect a split-roll assessment regime might have on assessors and the budget costs of administering the new "split" property tax system. In addition, the CMC Study evaluated the California Schools and Local Communities Funding Act submitted in January 2018. In total, the authors estimated that, for the first five to 10 years following adoption, a split-roll property tax system would cost county assessors $380 million to $470 million annually.[19] The high end of this range represents an approximately "80% increase in the combined statewide budgets of county assessors."[20]The CMC Study considered only the costs associated with paying and training approximately 900 new county government employees. It did not consider the cost of upgrades to technology systems needed to administer a split roll. Further, the cost estimates do not include costs incurred by other affected governmental agencies, such as tax collectors, clerks of the assessment appeals boards, and county counsels. Consequently, the annual cost to counties of administering a split-roll assessment regime would exceed the CMC's $380 million to $470 million estimate.

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13 Small businesses that rent from nonexempt property owners typically have a triple-net lease, which leads to a full pass-through of any tax increase to the renting business.

14 LAO Letter.

15 LAO Letter, p. 3.

16 Letter from Mark Durham (2019).

17 https://www.calassessor.org/index.php/resources/publications/2019-003-white-paper-split-roll/viewdocument.

18 Capitol Matrix Consulting, "Costs and Challenges of Split Roll Implementation-Evaluation of Assessors'' Survey, April 2018 ("CMC Study"). The survey pertains to a "generic" split-roll proposal and its impact on California assessors.

19 The cost estimates provided in the CMC Study are a subset of those included in the LAO Letter. The CMC Study includes assessor costs only, whereas the LAO Letter includes these costs, non-assessor costs, and decreased income tax revenues. Nevertheless, the CMC Study concludes, "The LAO's administrative cost estimates are generally comparable to our own assessment of the initiative's impact on county costs." (CMC Study, p. 9.)

20 CMC Study, p. 8.

3.2.4 *Frates and Shires at Davenport Institute (2012)*

In 2012, Frates and Shires (2012) assessed the economic impact of a split-roll property tax system proposed by Goldberg and Kersten (2010). While Frates and Shires (2012) do not address the specific rules set forth in the current proposals, they do provide insights into the economic impact of a split roll in general. Frates and Shires (2012) estimate that the proposed split roll would increase property tax revenues by $4 billion to $10 billion. Their approach used 4-R Equalization Ratio memos published by the California Board of Equalization for selected years, which summarize the total assessment and market values for property in California and calculate annual growth rates. Frates and Shires projected the total assessed and market values based on these growth rates, and used the difference between the two to estimate the revenue gain. The researchers used the California statewide model from IMPLAN to model the effect of the tax increase on the California economy. They allocated the expected tax increase to seven aggregated industry sectors, based on the sectors' respective shares of the economy's total output. Frates and Shires (2012) estimated that the split roll would reduce output in California by $71.8 billion and would result in 396,000 lost jobs during the first five years following adoption. They found that losses would be greater in succeeding years. The estimated economic effect varies by about 10% when the tax increase is allocated in other ways across the industry sectors—for example, by weighting capital-intensive industries more heavily (Frates & Shires, 2012, p. 20). The authors also evaluated which businesses would be most adversely affected by a split-roll assessment regime. They concluded that employment losses would be disproportionally concentrated in small businesses—especially those owned by women and minorities. Importantly, Frates and Shires (2012) did not estimate the economic impact of the increased government spending. Hence, they focused only on the costs of a split roll and ignored the impact of government spending on the state's economy.

3.2.5 *Ito, Scoggins, and Pastor (2015 and 2018)*

Shortly after Frates and Shires (2012) released their study, Ito et al. (2015) at the University of Southern California published a study on the effect of a split-roll valuation system in California. The scope of their analysis differs from Frates and Shires (2012) in that they estimated only the amount of tax revenues a split roll might generate, and did not estimate the net economic impact of the current proposals on the state's economy. The authors estimated that "reassessing commercial property at market value would generate about $9.2 billion, or between $8.2 and $10.2 billion, statewide in 2019-20" (Ito et al., 2015, p. 6).

Ito et al. (2015) used a database consisting of values for all California property, and for each assessment year they applied increases in the assessed value of properties that were sold in 2014 to all other properties of that year that did not sell. Their approach is a simplification and could under- or overestimate the true market value of the reassessed properties.

In 2018, the same authors published a revised estimate of the increase in property tax revenues that would result from the first version of the current proposals: $11.4 billion, with a likely range of $10.8 billion to $12 billion in 2019–2020 (Ito, Scoggins, & Pastor, 2018). The increase in their estimate was due primarily to the stronger-than-anticipated market recovery that occurred between 2015 and 2018.

3.2.6 *Benner and Giusta (2018)*

More recently, Benner and Giusta (2018) from the University of California at Santa Cruz published a study evaluating the first version of the current proposals. The authors did not provide independent estimates of the change in property tax revenues, nor did they estimate the net economic impact. Instead, they used estimates from Ito et al. (2018) and benchmarked these estimates against the total property tax revenues collected. Benner and Giusta concluded that the initiative "would likely have a modest positive impact" on the economy.

Benner and Giusta (2018) also critiqued the methodology employed by Frates and Shires (2012). In particular, they noted that Frates and Shires (2012) modeled the increase in taxes as reduced revenues to property owners "without further consideration of the multiple ways in which increased cost might be absorbed," including increased efficiencies, acceptance of lower profits, or passing the increased tax through to consumers in the form of higher prices. Partially

undermining their conclusion, however, is literature they cite claiming that no pass-through of property tax increases is likely to occur (Benner & Giusta, 2018, p. 8). Further, the authors provide no support for their assertion that the affected businesses are operating inefficiently, and therefore could offset the higher costs resulting from the increase in property taxes by becoming more efficient. Nor do they cite literature showing that the affected businesses currently are earning excess profits that could absorb the higher costs.

While Benner and Giusta (2018) disagreed with Frates and Shires (2012) on methodological grounds, many conclusions are common to both studies. For example, Benner and Giusta (2018, p. 1) suggested that "small businesses that have owned their primary premises for an extended period of time would have the most difficult time adjusting to being taxed at market-rate property values." They believe, however, that these effects are mitigated by (1) the proposed exemption for taxpayers who operate a business on land they own, provided the aggregate market value of all property they own in California is less than $2 million; and (2) the proposed exemptions from the personal property tax for most equipment and fixtures.

4 Our Economic Impact Model

As discussed above, previous studies of split-roll proposals focused on either (1) estimating the tax revenue that would be yielded by such proposals or (2) the economic impact of increasing taxes on businesses without taking into consideration the economic consequences of the increase in government spending made possible by the higher taxes. Our study attempts to model the net economic impact of a split-roll assessment regime inclusive of both increased government spending and the increased costs to commercial and industrial property owners.

In the following section, we describe the effects modeled, outline the model's assumptions, present the results, and provide a perspective on the model's predictions. In Section 5, we discuss the adjustments that would occur once the market reacted to the higher real estate property taxes on commercial and industrial properties.

4.1 *Types of Effects Modeled*

This section summarizes the likely economic effect of a split-roll system. To estimate this effect, we rely on an input-output model that captures the interdependencies between different industry sectors and regions.[21]

An input-output model is a widely accepted economic technique that enables researchers to measure the economic impact of a change in tax law along the value chain. For example, higher taxes on owners of commercial and industrial property will, at least initially, cause these owners to earn lower profits, which, in turn, will reduce the amount spent by property owners on discretionary purchases (such as bars and restaurants, clothing, etc.). Consequently, bars, restaurants, retailers, and other service providers will see reduced demand, perhaps causing some of them to reduce the number of jobs they offer, thereby increasing the number of unemployed workers.

In attempting to capture the change in economic activities along the value chain, we distinguish between the direct, indirect, and induced effects of a split-roll assessment regime:

1. Direct effects are measured at the industry sector directly affected by the increase in property taxes.
2. Indirect effects include the impact of the change in direct purchases along the value chain. For example, because schools will increase their purchases of supplies, equipment, janitorial services, food services, etc., the providers of these goods and services will have to purchase more goods and services from their suppliers, and so forth.
3. Induced effects measure the impact of the increased spending by employees and proprietors in the industry sectors directly and indirectly affected by a property tax increase.

For the purposes of this analysis, we express all values in annual 2019 dollars unless noted otherwise.

4.2 *Input-Output Model*

For this study, we use IMPLAN, a widely used and commercially available software and database system that allows researchers to conduct input-output analyses at the county, regional, state, and national levels. IMPLAN divides the economy into 536 industry sectors and 504 commodity codes. These sectors and commodities are derived from six-digit North American Industry Classification System (NAICS) codes. The first step of the analysis is to identify and isolate the various impulses that may occur due to the increase in property tax liabilities for owners of commercial and industrial property. Following the LAO's example, we identify four such impulses:

21 Wassily Leontief received the Nobel Prize in Economics in 1973 for developing the framework of input-output models.

1. Decrease in profits of commercial and industrial property owners
2. Increase in local government non-education spending
3. Increase in local government education spending
4. Increase in costs borne by local governments to implement the law

We describe each of these four impulses in more detail below.

4.3 *Model Assumptions*

Based on Ito et al. (2018), we assume that the split roll will generate $11.4 billion in tax revenues. For simplicity, we assume that the increase in property taxes initially will decrease the profits of business owners in the real estate sector (Sector 440 – Real Estate). We believe this is a reasonable assumption, especially given the fact that changing the industry sectors initially bearing the costs of the tax increase appears to have little impact on model results (Frates & Shires, 2012, p. 20).

The split roll requires the annual assessment to market values for all industrial and most commercial properties. This requirement would increase the workload of assessors in California, and California Assessors' Association (2019, p. 2) estimates that counties would require 900 additional government employees to complete the annual assessment roll, at a cost of $380 million to $470 million annually. For modeling purposes, we assume that the cost will be $400 million.[22,23] In our model, we treat this amount as an increase in institutional spending for non-education at the state and local government levels.

Because a split roll would reduce income and corporate taxes, the "Franchise Tax Board needs to determine the reduction to the General Fund and any other affected state fund of revenues," and those amounts would need to be transferred from counties to the General Fund.[24] Based on the assumptions listed above, the model predicts that the increase in property taxes for commercial and industrial properties of $11.4 billion will result in a loss of income tax revenues at the state and local levels of about $1 billion. In the model, this compensation takes the form of an increase in institutional spending, amounting to $1 billion for non-education at the state and local government levels—an increase that exactly offsets the reduction in expenditures caused by the loss of tax revenues.

In the current proposals, the remaining additional revenues resulting from the increased property taxes on commercial and industrial properties would be split between:

a. The Local School and Community College Property Tax Fund
b. Cities, counties, and special districts

According to the LAO, "roughly 60% [of the amount remaining after the offsets have been funded] would be allocated to cities, counties, and special districts, and roughly 40% to schools and community colleges" (LAO, 2018, p. 3).

In the model, the contribution to the Local School and Community College Property Tax Fund takes the form of an increase in institutional spending amounting to $4 billion for education at the state and local government levels. The contribution to cities, counties, and special districts takes the form of an increase in institutional spending equal to $6 billion for non-education at the state and local government levels.

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22 The Legislative Analyst's Office estimates that county spending for assessors' offices currently totals around $550 million per year. (LAO letter, p. 1.)

23 For modeling purposes, we accept IMPLAN's estimated 2,600 jobs associated with $400 million in spending. Besides assessors, the 2,600 jobs would include support staff to the assessors, which were not included in the estimate of the increase in the number of assessors published by California Assessors' Association (2019, p. 2).

24 Funding for Schools and Communities, SEC.8.6.(c).

4.4 *Model Results*

Figure 2 shows the likely effect of a split roll on employment and output in California. In each case, we distinguish between the direct, indirect, and induced effects. It should be noted that input-output models like IMPLAN use historical data to estimate indirect and induced effects. A 75% increase in property taxes, however, may cause business behavior to differ substantially from past behavior, and may result in a higher rate of relocation to neighboring states or a lower rate of investment in California than IMPLAN predicts. To the extent a split roll causes California to lose economic activity and jobs to Nevada, Oregon, and other states at a rate exceeding historical norms, the losses would be in addition to those discussed below.

The projected increase in property taxes of $11.4 billion per annum, which amounts to 0.38% of California's GDP in 2017, would result in a total loss of 120,000 private-sector jobs across California and a reduction in California GDP of $27.84 billion (or 0.94% of GDP in 2017). The increase in spending on assessors and other government employees of $400 million leads to 2,600 new public-sector jobs. The number of jobs created in county assessors' offices could be lower if private companies compete with the local governments for employees with the same skill set. This may be the case if private companies hire more assessment experts to file assessment appeals. Such competition would drive up wages of assessors' employees.

A portion of the revenues collected under a split roll would be used to offset tax revenue losses in other areas (e.g., corporate income tax). These offsets generate 6,500 jobs directly and 11,200 jobs after accounting for all other effects along the value chain. These are not new jobs, however, since the offsets merely replace tax revenues that exist without a split roll.

Based on the assumptions outlined above, local governments would receive an additional $6 billion in tax revenues, resulting in 39,000 new jobs at counties, cities, and special districts in California. In total, and after consideration of the ripple effects along the value chains, these additional revenues would generate 67,000 jobs in the California economy. The $4 billion in additional spending in education would result in 39,000 new jobs in the education sector and 58,000 jobs in total, once the impact along the value chain is considered.

Overall, the proposed split roll would generate net 21,000 additional jobs,[25] representing 0.1% of the labor force in California. These additional jobs come at a relatively high price, as the model predicts that California's GDP would decrease by $12.53 billion or 0.42%.

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25 –120.7+4.5+11.2+67.3+58.2 equals 21 after rounding.

Figure 2 Summary of Economic Impact

	Increased property taxes		Increased spending on assessors		Compensation for lost taxes		Increased spending on local government		Increased spending on schools		Total - Aggregated	
	Absolute	In %	Absolute	In %	Absolute	In %	Absolute	In %	Absolute	In %	Absolute	In %
Impulse in Billion USD	11.40	0.38%	0.40	0.01%	1.00	0.03%	6.00	0.20%	4.00	0.13%		
Employment												
Direct	-39,606.38	-0.2%	2,602.93	0.0%	6,507	0.0%	39,043.94	0.2%	38,910.23	0.2%	47,458.03	0.2%
Indirect	-15,694.19	-0.1%	377.45	0.0%	944	0.0%	22,609.54	0.1%	1,249.83	0.0%	-7,461.45	0.0%
Induced	-65,405.92	-0.3%	1,507.30	0.0%	3,768	0.0%	5,661.82	0.0%	18,065.47	0.1%	-19,455.34	-0.1%
Total	-120,706.49	-0.6%	4,487.69	0.0%	11,219	0.1%	67,315.29	0.3%	58,225.53	0.3%	20,541.24	0.1%
Value Added												
Direct	($19.42)	-0.65%	$0.31	0.01%	$0.78	0.03%	$4.66	0.16%	$3.73	0.13%	-9.95	-0.34%
Indirect	($1.57)	-0.05%	$0.05	0.00%	$0.11	0.00%	$2.38	0.08%	$0.16	0.01%	-0.57	-0.02%
Induced	($6.85)	-0.23%	$0.16	0.01%	$0.40	0.01%	$0.68	0.02%	$1.90	0.06%	-2.01	-0.07%
Total	($27.84)	-0.94%	$0.51	0.02%	$1.29	0.04%	$7.72	0.26%	$5.79	0.19%	-12.53	-0.42%

Source: BRG analysis based on IMPLAN. Billions of 2019 dollars.

While the model shows a small increase in the number of jobs, it is important to consider the types of jobs that would be lost and gained as a result of a split roll assessment regime. The model shows a significant decline in private-sector jobs and a significant increase in public-sector jobs (Figure 3). Many workers who are displaced from private-sector employment are likely to be economically and educationally disadvantaged, and therefore are unlikely to be candidates for the new jobs created by the expansion in the government workforce. Jobs in public education, for example, often require specialized undergraduate or even graduate degrees and a teaching credential. Displaced workers from, say, dry cleaning establishments and restaurants typically lack such qualifications. The increase in private-sector unemployment also would mean more competition for those jobs that survived. Increased competition for private-sector jobs will result in downward pressure on wages. This means some employers may no longer need to pay above the minimum wage to fill positions.

The model does not take into account growing pressures among local governments to finance employee pension obligations. Anzia et al. (2019) found that the cost of the median California pension increased six times ($7,022 per employee) more than the national median from 2005 to 2016. The study also determined local jurisdictions spent an additional 2% of general fund revenue to cover the increase, compared to the national median of 0.7%. Local governments responded to rising pension costs by shrinking workforces and reducing capital outlay budgets. If local governments were to receive additional property tax revenue, it is unknown if this revenue would instead be diverted to fund additional pension costs versus hiring additional employees.

Figure 3 Direct, Indirect, and Induced Employment Effect by Sector

Sector	Direct	Indirect	Induced	Total
Public Sector	66,832	-13	-746	66,073
Private Sector	-19,374	-7,449	-18,709	-45,532
Total	**47,458**	**-7,461**	**-19,455**	**20,541**

Source: BRG analysis based on IMPLAN. Differences due to rounding.

4.5 *Increased Employment in Education Probably Is Overstated*

For the 2018–2019 school year, California's K–12 sector had 307,000 teachers and 61,000 administrators and other staff. In the fall of 2018, there were 66,000 community college employees.[26,27] Therefore, the model predicts public education employment in California would increase by roughly 11%.[28]

It is doubtful that the state's labor market could supply that many qualified employees. Teachers need to have specialized education to fill teaching jobs, and recent research indicates a looming teacher shortage in California (Carver-Thomas & Darling-Hammond, 2017; Darling-Hammond, Sutcher, & Carver-Thomas, 2018). Given the state's housing shortage and high cost of living, it is questionable whether California could attract the number of teachers implied by the model.

Based on historical experience, it is likely that some school districts and community colleges would choose to use the property tax windfall to increase teacher and staff compensation, rather than to hire new teachers. Schools also might choose to increase spending on technology, sports, or other education-related activities. To the extent school district and community college spending diverges from historical norms, the IMPLAN model may overestimate the increase in education professionals. If so, the net number of jobs (public and private sectors, combined) added by a split roll may be overstated. The net loss of state GDP may be understated for similar reasons.

4.6 *Impact on Minority- and Women-Owned Businesses*

The adverse economic impact of a split roll on the private sector would have a disproportionate impact on women and minority entrepreneurs. According to the US Census Bureau, a larger proportion of women (39%) and minority (black 50%; Hispanic 41%) entrepreneurs report that they break even or lose money than do their male (35%) and white (35%) counterparts (Figure 4). Accordingly, the increased property tax cost to women and minority entrepreneurs will push them further away from profitability and closer to going out of business.

Figure 4 Proportion of Entrepreneurs Not Profitable, by Gender and Ethnicity

Number of Firms With Paid Employees

	Profitable	Lost Money	Broke Even	Total	Share Not Profitable
Male	1,414,589	382,522	382,375	2,179,486	35%
Female	440,715	143,116	135,967	719,797	39%
White	1,912,620	536,827	509,814	2,959,261	35%
Black	31,160	16,647	14,484	62,290	50%
Hispanic	112,859	36,414	41,855	191,128	41%

Source: US Census Bureau (2018).

A significant percentage of minority-owned businesses are in industries that rely upon local commerce (see Figure 5). Thus, minority business owners are less likely than non-minority business owners to have the option of relocating their businesses to neighboring states in response to an increase in property taxes or rent.

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26 See https://dq.cde.ca.gov/dataquest/Staff/StaffByEth.aspx?cLevel=State&cYear=2018-19&cChoice=StateNum&cType=O&cGender=B&Submit=1, accessed on October 23, 2019.

27 See http://employeedata.cccco.edu/fte_by_college_18.pdf, accessed on June 6, 2019.

28 It is not clear from the data whether the statistics on workers in the education system are based on headcounts or full-time equivalents. IMPLAN estimates the number of employees, which includes some employees with less than full-time employment. For simplicity, we do not attempt to further convert employment figures between public statistics and IMPLAN model results.

Figure 5 Top 10 Minority Industries by Share of Businesses Minority-Owned

Industry	Minority Share of Industry (%)	Minority Share of Sales (%)	Minority Share of Employment (%)
Taxi and limousine service	67	46	16
Home health care services	61	29	27
Child care services	60	35	23
Personal care services	58	39	21
Urban transit services	56	11	6
Interurban and rural bus transportation	55	26	23
Seafood product preparation and packaging	53	13	9
Dry cleaning and laundry services	52	26	24
Grocery stores	51	20	17
Charter bus industry	51	16	11

Source: US Small Business Administration (2016).

These findings are consistent with Frates and Shires' (2012) conclusion that an earlier split-roll proposal would "disproportionately target the state's female- and Latino-owned businesses."

5 Further Adjustments Not Captured by the Input-Output Model

The increase in real estate taxes on commercial and industrial properties resulting from a split roll is estimated to be 69% to 75%.[29] Such a large increase in businesses' tax burden—unprecedented in California—could trigger substantial further adjustments in the state's economy that are not captured by our input-output model.

For example, Benson and Johnson (1986) found that state and local taxes had a negative impact on economic activity. However, this negative impact often appears with a lag, which cloaks the true reason of the decline in economic activity.

In the following pages, we discuss some of the adjustment processes not captured by the IMPLAN model.

5.1 *Locational Decisions of Businesses*

If, relative to historical experience, the increase in taxes causes more businesses to close or fewer businesses to open, or if the increase causes more employers to start or expand operations in other states rather than in California, the negative impact on the state's economy will be greater than the negative impact estimated in the previous section. The findings of empirical research indicate that this is likely to happen. Enami et al. (2018) analyzed changes in commercial real estate taxes in Ohio from 2003 to 2016 and found that the passage of a property tax referendum had a negative impact on the number of establishments in the taxing jurisdiction in the years after the referendum. According to the authors, this effect is not driven by the death of firms, but by a decrease in business formation and the migration of firms to other areas.

Wu (2010) analyzed the impact of increasing commercial property taxes on establishments in Massachusetts. He found that a commercial property tax increase results in fewer establishments and a loss in employment.

Wu (2012) found that in the Chicago area, an increase in commercial property taxes also results in fewer establishments and a loss in employment.

5.2 *Businesses' Response to the Increase in Property Taxes*

Upon the adoption of a split roll, long-time owners of commercial and industrial properties will pay substantially more in property taxes, increasing their costs of operations. When faced with such a cost increase, these owners have three choices: absorb the increased costs by reducing profits (assuming they are profitable); pass the increased costs to others in the form of higher rent or higher prices; or sell the property.

5.2.1 Many Firms Would Be Unable to Absorb the Higher Costs

The economic impact analysis described in the preceding section assumed that commercial and industrial property owners would absorb the costs through lower profits. This, however, would not be an option for many businesses that are breaking even or losing money. For example, 50% of black-owned businesses report that they are not earning profits (see Figure 4). It is unlikely that these businesses could absorb the higher costs for long.

5.2.2 Some Firms Would Be Able to Pass the Higher Costs to Consumers

In many cases, commercial leases employ the "triple-net" concept, which makes the tenant or lessee responsible for paying all property taxes. In these cases, costs from a split roll would be borne directly by the lessee or renter, not the property owners.

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29 Governor of the State of California (2018, p. 170) estimates property tax collections in 2018–2019 at approximately $69 billion. The LAO estimates that the assessed value of commercial and industrial properties in California in 2017–2018 was $1.6 trillion (https://www.boe.ca.gov/meetings/pdf/2019/052919-K3a-4R-Act.pdf, last accessed on July 3, 2019). The LAO also estimates that property taxes paid by commercial and industrial real estate owners were $16 billion, implying that an $11.4 billion increase in property tax collections from commercial and industrial real estate owners would be a 69% increase. The LAO also estimates that the market value of commercial and industrial properties in 2017–2018 was $2.8 trillion. Using this figure as a base, the split roll would increase tax collections from commercial and industrial real estate owners by 75%.

In other cases, property owners may be able to pass through the cost of higher property taxes by charging customers higher rent or higher prices. Whether due to triple-net leases or the pass-through of higher taxes to lessees and renters, the decline in California's GDP resulting from a split roll could be even greater than the decline predicted by the economic model. This is because the increased cost to customers would cause them to reduce their consumption of goods and services, albeit spread across a wider range of industry sectors.

The literature on pass-through of commercial property tax increases is limited. Rolheiser (2017) is one of the few authors who has tackled this issue. She found that the portion of commercial property tax increases in Massachusetts passed on to renters was almost 100%.

The ability to pass the cost of higher property taxes to consumers will vary among businesses. Traditional brick-and-mortar businesses with less online competition would be more likely to pass tax increases to consumers. Because their competitors are subject to the same property tax system, there would not be a significant competitive disadvantage to passing the increased property taxes through to consumers in the form of higher prices. Accordingly, if voters approve a "split-roll" initiative, consumers can expect to pay higher prices for a variety of products and services, including:

- Fast-food resturant meals (e.g., McDonald's, Round Table Pizza)
- Traditional restaurant meals
- Theatrical movies
- Take-out coffee and tea (e.g., Starbucks, Peet's)
- Gasoline
- Dry cleaning
- Groceries (e.g., Safeway, Trader Joe's)
- Hair care at barber shops and hair salons
- Car washes
- Pet care at kennels and veterinarians
- Sporting events (e.g., Dodgers, 49ers)

Figure 6 shows the share of total household annual expenditures by category in the United States overall and in California in particular. Consumers in California spend approximately 15% of their household budget on food and 37% on housing. The last column of Figure 6 shows the classification of each of the expenditure categories into three levels of likely pass through of higher property taxes to consumers. Companies providing food to be prepared at home and food away from home are likely to be able to pass-through more of an increase in property taxes than, say, personal insurance and pensions, because local restaurants do not compete with restaurants out of state, whereas financial service providers compete at the national or even international level. Overall, we estimate that 28% of consumers' expenditures in California will be affected by strong or medium-strong pass through of increases in commercial property taxes.

Figure 6 Consumer Expenditures

Expenditure category	National share	California share	Likely Pass-Through
Average annual expenditure	$60,060	$64,333	
Food	13%	15%	***
Food at home	7%	10%	**
Food away from home	6%	5%	***
Housing (including direct property taxes)	33%	37%	*
Apparel and services	3%	2%	*
Transportation	16%	15%	*
Healthcare	8%	6%	***
Entertainment	5%	4%	**
Education	2%	3%	***
Cash contributions	3%	2%	
Personal insurance and pensions	11%	13%	*
Pensions and Social Security	11%	12%	*
All other expenditures	5%	3%	

Source: Taylor and Choi (2019). Percentages may not foot due to rounding.

In contrast, businesses that are less dependent on a physical retail presence in the markets they serve (e.g., travel services, financial services), and are more likely to face online competition, would be less able to pass-through the tax increases, due to competitive forces. These businesses, however, have other ways to escape the consequences of the tax increase: because they rely less on a physical presence to serve their customers, these businesses can more easily relocate to neighboring states that have a more favorable business tax structure, without giving up their California consumers. Traditional brick-and-mortar businesses generally do not have this flexibility, as they depend on their physical space for commerce.

5.2.3 Increase in Supply of Commercial and Industrial Properties for Sale Would Tend to Reduce Assessed Values and Lower Property Tax Revenues

In the short run, the tax increase would result in an increased supply of commercial and industrial properties for sale or rent. This would lead to a lower market price for such properties. Because commercial and industrial properties would be taxed at their market values, property tax revenues and the public spending these revenues support would be reduced, offsetting a portion of the gains from a split roll. Advocates of a split roll suggest that in the long run, recently sold commercial and industrial properties would be redeveloped. These "new" commercial and industrial properties, however, would compete with the current stock of commercial and industrial properties and lower the market price. Once again, the lower market price would offset a portion of the increased tax revenues and government spending predicted by the economic model.

5.3 *Decrease in the Supply of Land for Residential Development*

Perhaps the most dramatic change that a split roll would bring about is a change in local and regional government incentives for approving different types of development. Because tax revenues from commercial and industrial properties would grow more rapidly than tax revenues from residential development, local government decision-making would tend to favor development of these properties over residential properties. By making commercial and industrial development more attractive than residential development to decision-makers, a split roll would exacerbate the housing shortage and the extremely high housing prices that exist in many parts of California.

5.4 *Increase in Volatility of Tax Revenues*

California's most important revenue source—the state personal income tax ("PIT")—is "a highly volatile revenue stream."[30] As the Legislative Analyst noted in a recent report, the PIT's "unpredictable revenue swings complicate budgetary planning and contributed to the state's boom-and-bust budgeting of the 2000s."[31] During the bust portion of the revenue cycle, K-14 education typically suffers because (1) schools are heavily dependent on the General Fund for financial support, and (2) when PIT revenues tumble, the state typically reduces spending to balance the budget or minimize the deficit.

If the method for taxing commercial and industrial property is shifted from the Proposition 13 system to market-value assessment, city, county, and local school districts' revenues also will become more volatile, due to the volatility in property values. This volatility is likely to reinforce the volatility in PIT revenues, because surges in capital gains (the primary source of volatility in the PIT) tend to occur at the same time that property values surge. The increased volatility will further increase the instability of K-14 budgets.

Property tax revenues "tends to be the most stable" local and state tax revenue source (Commission on the 21st Century Economy, 2009, p. 24). Under a split-roll tax system, property tax revenues would be more volatile, because they would be far more sensitive to changes in the market price of commercial and industrial properties than they are now. Tax revenues would increase when the market prices rise and decrease when market prices go down, as they did during the 2007 to 2010 period.

30 Legislative Analyst's Office, "Volatility of California's Personal Income Tax Structure," September 28, 2017 (available at https://lao.ca.gov/Publications/Report/3703).

31 Id.

Summary

According to the LAO's estimates, adoption of a split roll would cause property taxes on commercial and industrial properties to increase, on average, by 75%.[32] Using this estimate and the findings of empirical research, we have estimated the total economic impact, inclusive of increased government spending and increased taxation of commercial and industrial properties. We estimate that adoption of a split roll would have the following economic effects:

- Businesses would react to the tax increase by shedding 120,000 jobs. These job losses would result from (1) firms relocating outside of California, (2) firms reducing the number of workers they employ, and (3) firms going out of business.
- Women- and minority-owned businesses would be affected disproportionately by the increased costs of operations resulting from the increase in property taxes, because a larger percentage of these businesses are not profitable and would have no way to absorb the higher costs.
- The loss of private-sector jobs would be more than offset by an increase in government spending—unless school districts and local governments use the increased property tax revenue to raise teacher and government employee salaries rather than create new jobs. Our economic model puts the net increase in employment at 21,000 jobs, due to the increase in taxpayer-funded government workers.
- California's GDP would decline by $12.53 billion.
- Brick-and-mortar businesses, such as dry cleaners, restaurants, and beauty salons, that do not compete with online or out-of-state firms would have an incentive—and in many cases, the ability—to pass the increase in their property taxes to consumers, in the form of higher prices. The available data, however, do not allow us to estimate the additional amount that consumers would have to pay.
- Adoption of a split-roll system for assessing taxable property would reinforce incentives for local governments to favor commercial and industrial development over housing development, exacerbating California's housing shortage and affordability problem.

Because the IMPLAN model is based on historical behavior, it does not account for all potential deleterious effects from a split roll. For example, it does not quantify the full impact that a split-roll system would have on business decisions regarding where to locate or expand operations. If a split roll results in a profound change in the relative attractiveness of California to investors and business owners, the initiative will more negatively affect the California economy than our quantitative model yields.

32 Total assessed value of commercial and industrial real estate properties in 2017–2018 was $1.6 trillion, resulting in an estimated $16 billion in property taxes. (Letter from State of board Equalization Chief of Legislation, Research and Statics, Mark Durham (2019)).

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