Report to the City of Los Angeles on Potential Revisions to the Business Tax

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Final Report

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Executive Summary

This report provides a comprehensive analysis and review of eight potential changes to the City of Los Angeles' Business Tax proposed by the Business Tax Advisory Committee (BTAC). The proposed changes are intended to spur economic growth and employment in Los Angeles. The following table summarizes the predicted job growth and City revenue effects for each Proposal:

Proposed Change	**Expected City Net Revenue Impact Per Year: Worst Case**	**Expected City Net Revenue Impact Per Year: Average Case**	**Expected City Net Revenue Impact Per Year: Best Case**	**Expected Employment Change: Average Case**
1. Various Rate Reductions for Certain Service Industries	$36 million loss	$5 million gain	$48 million gain	39-94 thousand (depending on rate reduction)
2. Various Rate Reductions for All Industries	$35 million loss	$70 million gain	$261 million gain	94-131 thousand (depending on rate reduction)
3. Limit Maximum Tax per Entity to $2 Million	$8 million loss	$7 million loss	$7 million loss	466
4. Rate Reduction for Larger Companies Establishing Headquarters in Los Angeles	$11 million gain	$26 million gain	$40 million gain	27 thousand

Proposed Change	Expected City Net Revenue Impact Per Year: Worst Case	Expected City Net Revenue Impact Per Year: Average Case	Expected City Net Revenue Impact Per Year: Best Case	Expected Employment Change: Average Case
5. Rate Reduction for Companies Close to Public Transportation Centers	$1million loss	None	$2 million gain	24 thousand
6. Rate Reduction for Businesses Which Remain in Los Angeles	$3 million gain	$6 million gain	$8 million gain	11 thousand
7. New Business Tax Exemption	$1 million gain	$4 million gain	$7 million gain	17 thousand
8.Tax Reductions for Job Creation	$1 million gain	$1 million gain	$2 million gain	12 thousand

Revenue figures are rounded to nearest $million, and employment to nearest thousand. All of the expected revenue and employment impacts are expected to *occur over time.* The Report also details the methodology used in the analyses of the Proposals, including the underlying economic theory and data utilized.

Introduction

This report provides a comprehensive analysis and review of changes to the City of Los Angeles' Business Tax proposed by the Business Tax Advisory Committee (BTAC). The purposes of the changes proposed by the BTAC are to attract businesses to, retain businesses in, and encourage business expansion within, the City of Los Angeles. This report reviews and analyzes the overall revenue impact of: rate changes to the Los Angeles Business Tax (LABT); limits on the LABT paid by businesses; addition of an

Administrative Headquarters classification to the LABT; inclusion of various proposed incentives in the LABT; and various changes in the calculation of the LABT.

This report also analyzes and reviews the impact of various initiatives in relation to the additional objectives of increasing the tax base and creating incremental jobs, thereby increasing proceeds to the City from greater sales tax receipts, property (both residential and commercial) tax receipts, utility tax receipts, and other fees and fines from permits, licenses, etc. and also quantifies the economic multiplier effects of the proposed initiatives.

The following *specific proposals* are addressed:

►Reduction in tax rates for Classifications 6 – 9 which include, but are not limited to, Professional Services Firms, Telemarketers, Collection Agencies, Brokers and Personal Services Firms, from tax rates of Classes 6 (0.255%), 7 (0.315%), 8 (0.356%) and 9 (0.507%). The impact of a 0.10%, 0.15%, 0.20% and 0.25% tax rate for all taxpayers falling within those classifications is examined.

►The effect of a potential reduction in tax rates for Classifications 1 – 9 (which comprise the majority of taxpayers), from tax rates of 0.101% to 0.507%. The impact of a 0.000%, 0.050% and 0.100% tax rate for all taxpayers falling within these classifications is examined.

►Limitation of the maximum total annual Gross Receipts Tax payable by any taxpayer to $2 million per legal entity.

►Establishment of a tax rate of 0.101% for companies that establish or maintain their corporate administrative headquarters in Los Angeles so long as they either (i) employ a minimum of 200 people at their headquarters location or (ii) invest capital expenditures of at least $25 million in, and employ at least 100 people at, their headquarters location.

►Creation of a Transit Oriented Development Incentive to reduce by 50% the City business tax rate for all businesses with up to $1 million of gross receipts located within one-half mile of MTA/Metrolink or Public transit stops excluding bus stops but including

dedicated busway stops (e.g., the Metro Orange Line) for the first five years after the business commences generating gross receipts at that location; in year six, the discount declines to 40%; in year seven, 30%; in year eight, 20%; in year nine, 10%; and in the tenth year of operations, there is no reduction in the business tax rate.

► Establishment of a Business Retention Incentive in which, commencing with the sixth year (i.e., after 72 months have elapsed) of a business maintaining its location in Los Angeles, the taxpayer/business would receive a credit towards its current annual gross receipts taxes due equivalent to 10% of the total business taxes owed for each of years six through 10. The company would receive an additional credit on its business tax bill equivalent to 25% of the total business tax owed for each year thereafter starting with year 11 onward.

► Expand New Business Tax Incentive by amending Los Angeles Municipal Code Section 21.30 to remove the requirement that new businesses qualifying for the incentive have less than $500,000 in annual gross receipts; extend the timeframes and incentives as follows: first three years following location within the City – pay no business tax; the fourth year following location within the City – pay 1/3 of business tax otherwise due; the fifth year – pay 2/3 of business tax otherwise due; and in the sixth year – pay 100% of business tax otherwise due.

► Create a Business Tax Incentive for Job Creation in the City of Los Angeles by offering a tax credit for each new job created by businesses located within the City of Los Angeles. The tax credit would be based on the increase in year-over-year total number of persons employed by a business in the City of Los Angeles. Credits to be calculated in increments of $100 per new job created on an escalating scale based on their respective assessed tax rate (e.g., $100 if assessed at $0.101 or $0.127, $200 if assessed at $0.255, $300 if assessed at $0.315, $400 if assessed at $0.356 and $500 if assessed at $0.507).

To accomplish these objectives, conventional economic analysis is employed. The study first reviews related theory on tax reductions, and then performs analyses of the impacts of prior reductions in the business tax. These analyses are used, in conjunction with

theory, to underpin predicted outcomes of each of the Proposals in terms of job growth and net revenue effects to the City of Los Angeles. This report first discusses the tax structure of Los Angeles, then reviews economic theory on the impacts of municipal tax reductions, including a discussion of whether a tax reduction can be revenue neutral to a city. The study then examines job and business impacts of two prior Los Angeles business tax reductions. These results are used to underpin analyses of the eight Proposals, which appear next in the paper. Each of these Proposals is examined in terms of their predicted job and revenue impacts to the City. The final section has overall observations, including some general predictions on the potential timing of job and revenue outcomes as a result of the potential adoption of any of the proposals.

Gross Receipts (Business) Taxes in Los Angeles

The City gross receipts tax is projected to bring in $424 million in revenue in FY2010-2011, representing approximately 10% of the City's revenues. Most for-profit industries are taxed, with rates ranging up to $ 5.07/thousand of gross receipts (sales[1]), depending on industry. Exceptions to taxation exist for certain small businesses. When examining the impact of any potential change to the business tax, it is important to put such changes in perspective vis-à-vis other taxes which the City collects. These taxes are discussed next.

Overview of City Tax Revenues

More than 70 percent of City General Fund revenue is from seven major taxes: property, utility, business, sales, hotel, documentary and parking. Projected collections, for fiscal year 2010-11, by major source are shown below:

[1] Throughout this report the term "sales" is sometimes used, and "gross receipts" is also sometimes used. Both relate to the revenues which a company generates.

Table 1

Los Angeles City Revenue Summary[2]

Projections for Fiscal Year 2010-11

(Thousands of Dollars)

Revenue Source	*Amount*
Property Tax	$1,424,143
Licenses, Permits, Fees and Fines	710,068
Utility Users' Tax	624,898
Business Tax	424,036
Sales Tax	291,656
Power Revenue Transfer	258,815
Parking Fines	133,500
Transient Occupancy Tax	127,193
Documentary Transfer Tax	100,000
Real Property Transfer Tax – Corporate	2,000
Parking Users' Tax	84,000
Franchise Income	46,700
Interest	14,890
State Motor Vehicle License Fees	13,792
Tobacco Settlement	9,500
Grant Receipts	12,198
Transfers from Telecommunications Development Account	7,650
Residential Development Tax	1,500
Special Parking Revenue Transfer	10,000
Reserve Fund Transfer	3,617
Total General Fund Receipts	**$4,300,156**

Property tax includes all categories of the City allocation of one percent property tax collections, such as secured, unsecured, state replacement, redemptions and penalties, supplemental receipts and other adjustments, and is net of refunds and County charges.

[2] Source: Supplement to Mayor's Proposed Budget 2011-12. Los Angeles City Administrative Officer (CAO), April, 2011

Also included are property taxes remitted to the City as replacement revenue for both vehicle license fees and sales and use taxes.

Major tax revenue is typically received by the City some time after an economic event; the property tax is collected more than a year after valuations are determined and business tax collections are dependent on business activity in the prior year. Sales tax collections trail economic activity by three to six months and utility and documentary tax receipts follow the economy by one to two months.

Two major sources of City revenue are sales taxes and gross receipt taxes. A 10 year history of both is shown below. The amounts of these two taxes are generally correlated, and are similar in magnitude.

Table 2
City of Los Angeles Sales and Business Tax Collections from 2000-2011[3]
(in $millions)

Year	Sales Taxes	Business Taxes		Year	Sales Taxes	Business Taxes
2000-1	357.2	344.6		**2006-07**	333.9	464.3
2001-02	351.1	360.3		**2007-08**	335.6	467.0
2002-03	363.8	356.0		**2008-9**	311.9	451.5
2003-04	377.9	373.2		**2009-10**	280.1	424.8
2004-05	316.6	396.8		**2010-11**	296.6	424.0
2005-06	323.6	434.5				

[3] Sources: CAO (but 2010-1 business taxes provided by Office of Finance). Note: 2010-11 data are preliminary.

Sales Taxes[4]

The city collects a 1% sales tax on taxable retail sales of tangible personal property. The majority of taxable sales are from the following categories:

Apparel stores
General merchandise stores
Food and drug stores
Eating and drinking establishments
Home furnishings and appliances
Building materials and farm implements
Auto dealers and auto supplies
Service stations
Other retail stores
Retail Stores Total
All other outlets

Business (Gross Receipts) Taxes

The City imposes a tax upon businesses located within the City or doing business therein. The City's business tax is typically based on gross receipts; it is not an income tax. The applicable tax rate varies from $1.01 per $1,000 to $5.07 per $1,000 of gross receipts depending on which classifications are applicable to each business. Taxpayers apportion gross receipts between jurisdictions in cases in which they operate or make sales both inside and outside the City. Business tax reform to date includes a 15% tax rate reduction, a small business exemption, a start-up incentive, a bad debt deduction, entertainment industry tax relief, tax simplification through consolidation of business tax classes, Internet tax relief and the recently-approved film production tax credit. The 2011-12 estimate includes $15.2 million of economic growth; after adjusting for the film production tax credit, this is 4% above estimated 2010-11 renewal revenue.

The economic impact of the tax is strongest on firms having the lowest profit margins, as shown in the following three examples. In these examples I use a tax rate of .4% (or $4 per $1,000) to illustrate this economic impact.

[4] For a breakout of the relative sales taxes related to each category, the reader is referred to: Supplement to Mayor's Proposed Budget 2011-12. Los Angeles City Administrative Officer, April, 2011

Example 1. Suppose a Los Angeles company has $1 million in sales (gross receipts) in Los Angeles, and has $900,000 of expenses before the business tax. Its after tax profit is:

Sales	$1,000,000
Less: Expenses Before Tax	- 900,000
Profit Margin Before Tax	$100,000
Less: Business Tax at .4% of Sales	- 4,000
After Tax Profit	$96,000

Here, the .4% business tax is the equivalent of a 4% income tax (or $4,000/$100,000).

If instead of the 10% margin in the above example, the firm has a 1% margin, the tax reduces profits by 40%, as shown in the next example.

Example 2. Suppose a Los Angeles company has $1 million in sales (gross receipts) in Los Angeles, and has $990,000 of expenses before the business tax. Its after tax profit is:

Sales	$1,000,000
Less: Expenses Before Tax	- 990,000
Profit Margin Before Tax	$10,000
Less: Business Tax at .4% of Sales	- 4,000
After Tax Profit	$6,000

Here, the .4% business tax is the equivalent of a 40% income tax (or $4,000/$10,000).

Because new/startup businesses often operate initially at a loss, the effect of the tax is particularly strong for them. This is shown in the next example.

Example 3. Suppose a Los Angeles company has $1 million in sales (gross receipts) in Los Angeles, and has $1,090,000 of expenses before the business tax. Its after tax profit is:

Sales	$1,000,000
Less: Expenses Before Tax	1,090,000
Profit Margin Before Tax	-$90,000
Less: Business Tax at .4% of Sales	- 4,000
After Tax Loss	-$94,000

Here, the .4% business tax is the equivalent of an infinite income tax. Moreover, if the company's expenses are cash basis, it may have to pay the tax out of either accumulated cash reserves or borrowing.

Empirical Relationship Between Business Activity and LA Revenues

The purpose of this section is to estimate how much City revenues businesses generate. The reason this is important is because, for each of the Proposals considered, the net revenue impact to the City must be estimated. While it is relatively straightforward to estimate the direct revenue loss to the City under each Proposal, in terms of reduced business tax collections, it is also necessary to estimate the resultant gains to the City in terms of other tax revenues, because of the resultant business expansion. To the extent a reduction in the business tax increases business activity, the LA tax base expands, and other revenues should increase. Although most of the revenue sources listed in Table 1 should increase with business activity, the *magnitude* of the relationships between changes in them and changes in business activity, at first blush, are not obvious. For taxes, fees, charges, etc. *directly assessed* on businesses, generally the more businesses there are in Los Angeles, the higher such revenues should be.

With respect to property tax revenues, according to the LA County Assessor's report, 49.2% of assessed value is related to business property (14% of which is business personalty, and 86% of which is residential rental and commercial industrial)[5]. The more businesses in LA, the more demand to rent commercial properties. Such properties, on sale, are often valued based on a "cap rate", which is a function of occupancy percent. Clearly, more business can drive up valuations and thus tax collections. However, Proposition 13 places a 2% limit on annual revaluations (unless a property is sold), so for any property not sold, increased occupancy may not have a large effect until that property is sold. Of course, real estate taxes are also a function of general demand

[5] *Office of the Assessor: 2010 Annual Report.* Assessor of Los Angeles County.

trends which may or not be linked to business activity in the City. The conclusion is that increased business activity should result in increased property tax revenues, although the magnitude of this relationship can fluctuate.

Note that the property tax is paid only by property owners. For secured property (real estate), business tenants typically do not pay the property tax, and instead the landlords pay it. In the next section, where I estimate the *average* property tax paid by business, it should be noted that in fact the incidence is on property owners, so that their property tax is much higher than shown in the next section, and (at least for realty) zero for tenants. Accordingly, the average property tax estimated in the next section is the average of landlords and tenants.[6]

Sales tax collections clearly increase with business activity. Businesses both pay such taxes on certain purchases, and collect them on retail sales of tangible personalty sold to customers (the latter of which increases with larger Los Angeles employment). According to the City CAO, approximately half of the licenses, permits, fees, and fines are charged to entities having a quasi-relationship to the City (e.g., the airport and the harbor). To the extent that more LA-based companies demand more goods and services which transit through the airport and port, the City may provide additional services, for which it receives a fee. The other half of licenses, fees, and fines are a mix of activities, some of which are related to business activity.[7]

According to the Los Angeles Department of Water and Power (DWP), 63.8% of revenues is based on commercial usage[8], so clearly there is a link with increased business activity and utility tax revenues. Of course, such revenues rise and fall with gas and electricity prices as well. Related to the utility tax is revenue from power revenue transfers. These are the equivalent of profit dividends from DWP to the City over time, and to the extent more business activity results in more power sales, there is a link here as well.

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[6] Under conventional economic theory, part of the actual burden of the property tax is likely to be passed on to tenants by higher rents, so in that sense the average property tax estimated in the next section would apply, in a general sense, to all businesses.

[7] Much of such collections are from fire, police, sewer, etc. which may increase indirectly with increased business activity.

[8] *Los Angeles Department of Water and Power System, Financial Statements, June 30, 2010 and 2009.*

Document transfer taxes are a mix of business versus personal related fees. Transient occupancy taxes are a function of both business and personal activities. More hotels may result in more such collections, as can increased business travel to the City which is a function of increased business activity. A portion of parking fees and fines should also be directly business related to the extent they relate to business vehicles, etc.

When it comes to taxes, fees, charges, etc. assessed on *people*, there is also an *indirect link to business activity*. That is, the more businesses there are in Los Angeles, the more employees they will have in Los Angeles, many of whom may live in the City. Such individuals will result in revenues to the City (real estate, sales, and utility taxes, etc.). Also, more businesses in the City will result in more people from outside the City visiting them or using their services or products, and when they are in the City, they will result in more City revenues (sales taxes, parking tickets, parking taxes, etc.).

The point of the above discussions is that many, if not most, of the City's revenues are in part related to business activity. However, given the nature of the data collected by the City, it is very problematic to try to *exactly* link the amount of such revenues to business activity. Accordingly, a reasonable approach is to empirically estimate the relationship of City business activity over time to City revenues by statistical methods. To empirically examine the relationship between business activity and revenues, I perform linear regressions of City revenues (excluding business tax collections, and inter-fund transfers) on gross receipts reported to the City on business tax returns, for the period 2000-2010.[9] I also run regressions of City revenues on the number of firms in Los Angeles. As discussed below, regression is like a "high powered" correlation analysis, which allows for much better analysis than simple correlation.

In statistics, linear regression is a widely used method to model the relationship between a scalar variable *y* and one or more variables denoted *X*. In linear regression, data are modeled using linear functions, and unknown model parameters are estimated from the data. The first linear regression model I estimate is:

[9] Data on tax collections were provided by the CAO. Number of firms filing business tax returns, and their related gross receipts, were provided by the Office of Finance.

$$TR_t = \$2{,}000{,}678{,}117 + \$.01147 GR_t + e_t\,, \qquad (1)$$
$$\qquad\qquad (324838620) \quad (.00193)$$

where:

TR_t = total City revenues in year t (excluding business tax collections and inter-fund transfers), and
GR_t = total gross receipts in year t for businesses filing business tax returns in the City in year t.

Robust standard errors[10] are in parentheses, and the model's R^2 (explanatory power) is 80%. Both the intercept and beta coefficient are statistically significant at .001 or better. The first estimated figure shown is $2,000,678,117. This is the intercept (which is a constant) which estimates that, independent of the gross receipts earned by firms in Los Angeles, each year's revenues are $2 billion (rounded). The second estimated figure shown, $.01147, is the beta coefficient. It estimates that City revenues also increase 1.147 cents for each additional dollar of gross receipts reported (i.e., sales) by businesses (in addition to the constant of $2 billion per year). The standard error below this latter number indicates that this estimate has a range of estimation (a so-called "confidence interval") of plus or minus .193 cents.

To estimate the importance of businesses on City tax collections, we can think of Equation (1) as follows. Since the model's explanatory power is 80%, this means that 20% of fluctuations in City revenues (in this model) are somewhat random, perhaps due to fluctuating energy prices (which affect utility taxes and power revenue transfers), fluctuating real estate markets (which affect property taxes), fluctuations in rates and rules on tax collections and fees, etc. Of the 80% captured by the model, about $2 billion are, statistically speaking, unrelated to business activity. Since average *TR* from 2000-

[10] Standard errors are the estimated range, or "confidence interval", which the estimated statistic can potentially be above or below. "Robust" standard errors control for differences in size of the data.

to 2010 was $3.56 billion, this means that a little less than half of tax revenues, which can be modeled, are associated with business activity.

As an alternative, I run a regression of total revenues (except for the business tax itself) on total firms filing the City business tax, or *NUM*. The estimate here is as follows:

$$TR_t = \underset{(114,311,426)}{\$1,633,603,730} + \underset{(351.39)}{\$4553.58}NUM_t + e_t \quad , \qquad (2)$$

where:

TR_t = total City revenues (excluding the business tax) in year t, and
Num_t = number of firms in year t for businesses filing business tax returns in the City in year t.

Robust standard errors are in parentheses, and the model's R^2 (explanatory power) is 95%. Both the intercept and beta coefficient are statistically significant at .001 or better. The regression indicates that each year's revenues are $1.6 billion (rounded) plus they increase $4554 (rounded, and not including the business tax itself) for each additional business filing a business tax return. It is important to note that the $4554 estimate is based on an *average firm*. There are some firms in Los Angeles with hundreds of millions in sales, some with next to no sales, and a wide variety of firms having sales between these two extremes. Certainly the very largest firms will result in much more revenues to the City than the smaller firms.

Recall that *TR* includes a number of revenue sources, including property taxes, sales taxes, utility taxes, etc. We can decompose the individual components of (2) by running separate regressions for the components of tax on number of firms as well. Using the same methodology, I estimate that each firm is associated with: $3463 in property taxes; $491 in utility taxes; $253 in sales taxes; $663 in licenses, etc.; $258 in power revenue transfers; $119 in municipal fines; $238 in document taxes;$113 in parking taxes;$21 in franchise fees; and $96 in interest income.[11] Again, note that these are averages, and

[11] Note that the sum of the individual components of taxes associated with businesses exceed the $4554 total since some revenue sources are actually negatively related to the number of firms. Using the above estimates, the relative percents are: secured property tax: 52%; unsecured property tax: 9%; utility tax:

accordingly larger firms would drive larger tax revenues for the City. Note that these estimates have already controlled for other random effects (through the error term in the regression models; see above discussion) which might affect their relationship with business activity. Such random effects could be fluctuations in utility prices for utility taxes, market movements in real estate for property taxes, etc. The above estimates also control for the portion of each revenue source attributable to individuals (by the intercept or constant term in the regression; see above discussion). Also, please refer to the discussion in the previous section of the meaning of average property taxes paid by businesses.

For business tax revenues, we get:

$$BT_t = \underset{(47.53)}{1015.99} NUM_t + e_t \ , \qquad (3)$$

where:

BT_t = total City business tax revenues in year t (excluding business tax collections and inter-fund transfers), and
Num_t = number of firms in year t for businesses filing business tax returns in the City in year t .

The robust standard error is in parentheses, and the model's R^2 (explanatory power) is 99%. The beta coefficient is statistically significant at .001 or better. The regression indicates that each year's revenues increase $1016 (rounded) for each additional business filing a business tax return. Note that we do not include a constant here since there is generally a straightforward relationship between business taxes paid and the number of firms registering for the business tax.

Comparing (2) to (3), the implication is that even if we eliminated the business tax on an average new firm, the gain of $4554 of overall revenue would more than make up for the loss of $1016 of business tax revenues, assuming this was a new firm beyond the

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9%;sales tax: 4%;licenses, etc:12%; power revenue transfers: 4%; all others combined:10%. These relative percents are noted later in all Proposal analysis tables.

normal growth in new firms in the City, it did not crowd out an existing firm, holding other factors constant, and assuming all other factors were in the same relevant range used to estimate the regression parameters.

We can also estimate the relationship between business activity and just business tax collections. The intercept is suppressed since we expect a linear relationship. We have:

$$BT_t = \underset{(.00009)}{.00222}GR_t + e_t \ , \qquad (4)$$

where:

BT_t = total City business tax revenues in year t (excluding business tax collections and inter-fund transfers), and
GR_t = total gross receipts in year t for businesses filing business tax returns in the City in year t.

The robust standard error is in parentheses, and the model's R^2 (explanatory power) is 99%. The beta coefficient is statistically significant at .001 or better. The regression indicates that each year's revenues increase .222 cents for each additional dollar of gross receipts reported by businesses. Thus, the average business tax rate faced by firms was .22% of gross receipts from 2000-2010. The standard error below this latter number indicates that this estimate has a range of plus or minus .009 cents.

Later I will use these estimates to predict other revenue gains resulting from increased business activity resulting from reductions in the business tax.

The Competitive Landscape

Relatively few U.S. cities have significant gross receipts or income taxes. The few cities which have such taxes are located primarily in the Northeast and in Ohio. In California, city income taxes are not allowed under the State's constitution, and relatively few cities (e.g., Culver City, Los Angeles, and Santa Monica) have *significant* city gross receipts taxes. Other California cities have gross receipts taxes, but at lower rates. The Table

below shows gross receipts tax rates for major Southern California cities. Top, median, and low rates are shown.[12] The Table also lists cities, in Los Angeles County[13], which have taxes based on employment, for the sake of completeness. As can be seen, gross receipt rates for Los Angeles are considerably higher than those of most of other cities.

Table 3

Gross Receipts Tax Rates for Los Angeles County Cities

Rate per $1000 of Gross Receipts, As of 2009

City	Highest Rate	Median Rate	Lowest Rate
Alhambra	.19	.19	.19
Arcadia	Employee based	Employee based	Employee based
Azusa	.96	.16	.16
Baldwin Park	Employee based	Employee based	Employee based
Bell	.44	.44	.44
Bell Gardens	Employee based	Employee based	Employee based
Bellflower	Employee based	Employee based	Employee based
Beverly Hills	Mixture of gross receipts and Employee based; for certain industries subject to gross receipts taxes, highest rate is $23.89 (commercial property rental only)	Mixture of gross receipts and Employee based; for certain industries subject to gross receipts taxes, median rate is $1.27	Mixture of gross receipts and Employee based; for certain industries subject to gross receipts taxes, lowest rate is $1.27
Burbank	Employee based	Employee based	Employee based
Calabasas	0	0	0
Claremont	1.10	.31	.04
Compton	1.07	.29	.29
Culver City	3.01	1.01	1.01

[12] Source: *2009 Kosmont-Rose Institute of Doing Business.* Note that taxes on real estate (based on square footage), payroll, etc., taxes are not shown.

[13] For taxes imposed on businesses outside of LA County, the reader is referred to the *2009 Kosmont-Rose Institute of Doing Business.*

Table 3 (Continued)			
Diamond Bar	0	0	0
El Monte	1.47	.21	.21
Gardena	1.01	.55	.51
Glendale	0	0	0
Hawthorne	1.00	1.00	1.00
Huntington Park	.4	.4	.4
Inglewood	1.65	1.10	1.10
Irwindale	.33	.33	.33
La Puente	Employee based	Employee based	Employee based
La Verne	.21	.21	0
Lawndale	Employee based	Employee based	Employee based
Lomita	.85	.85	.85
Long Beach	Employee based	Employee based	Employee based
Los Angeles[14]	5.07	2.55/1.27	1.01
Manhattan Beach	1.79	1.79	1.79
Monterey Park	Employee based	Employee based	Employee based
Palmdale	.56	.13	.06
Pasadena	Either no tax or employee based tax, depending on industry	Either no tax or employee based tax, depending on industry	Either no tax or employee based tax, depending on industry
Pico Rivera	.31	.31	.31

[14] The data is all from 2009 as shown in the *2009 Kosmont-Rose Institute of Doing Business*. The top rates for Los Angeles are the most recent and may not be strictly comparable to other cities' rates which are reported by *Kosmont* for prior years. Note: medians are the middle of the categories of taxation, listed in the *Kosmont* publication.

Table 3 (Continued)			
Pomona	1.16	.96	.08
San Fernando	1.47	.21	.21
San Gabriel	Employee based	Employee based	Employee based
Santa Monica	5.03	1.28	1.28
Temple City	Employee based	Employee based	Employee based
Torrance	Employee based	Employee based	Employee based
West Hollywood	.01	0	0

Since a city tax represents a cost of doing business, cities having such a tax have a clear competitive disadvantage over cities which do not. For example, a company which desires to locate in a very large U.S. city could potentially choose Dallas over Los Angeles (holding all other factors constant) since Dallas does not have a city-based income or gross receipts tax. Similarly, a company desiring to locate in Southern California might choose an Orange County or San Bernardino County locations, since cities in these counties do not have significant gross receipts taxes. As a final example, a local entrepreneur might decide to locate just outside of the Los Angeles border (e.g., Burbank, Glendale, or Pasadena) since they are lower taxed jurisdiction.

Do City Tax Incentives/Reductions "Work"?

A long line of economics research has indicated that taxes can affect the behavior of companies. The basic idea is as follows. Taxes are a cost of doing business, which firms consider in their ongoing and planned operations. Tax cuts can affect: 1. decisions on whether to move to (or expand operations into) a new city; 2. if a firm already is in a city, how the tax reductions are spent and whether to expand in the city; and 3. if a firm is considering moving out of a city, whether the tax reductions are sufficient to keep it there.

If a firm is *considering opening a new facility in, or moving an existing facility to*, a new city, tax costs in that city are a consideration. Holding all other factors constant, a firm would locate in the city with the lowest taxes. Of course, transactions costs (a term in economics used to describe other costs of changing behavior) come into play. For example, if a firm is considering moving to either City A or City B, and City A has a much lower tax rate, but the cost of moving to City A is much higher than moving to City B, the firm may choose City B. While it is somewhat straightforward to identify the potential tax savings of firms in general by comparing city tax structures, transaction costs are idiosyncratic to each firm and difficult to estimate. Accordingly, how effective a tax rate reduction will be in a city is in part an empirical question; that is, examining past data to see if prior tax cuts seemed to be enough to overcome transactions costs and induce firms to move. Certainly, the larger the tax reduction, the more likely the tax savings would exceed transactions costs. The net result is if the firm moves into the city, new jobs and additional tax revenues will be created in that city, which will be enhanced through the "multiplier effect" (see discussion in next two sections).

For firms *already operating in a city which **are not** considering moving*, and there is a tax reduction, there is what is known in economics as an income effect. Essentially, the firm has more spendable cash. If the owners can earn a higher return outside the firm, they are less likely to reinvest it. For example, a small firm owner could put the money in a savings account. Or, a publicly-traded company could pay a dividend to shareholders. In most cases, firms can actually earn a higher return by instead reinvesting that cash into the business, through increased assets, payroll, supplies, etc. Certainly, some of that would be spent in the local city which, through the multiplier effect, results in increased employment and tax revenues for the city.

For firms *already operating in a city which **are** considering moving*, and there is a tax reduction, the reduction may be sufficient to keep operating costs comparable, or lower than, operating costs of other cities to which the firm might locate. Here, the firm has already calculated that tax savings (before any tax reduction) would make up for transaction costs of moving. It is then a question about whether the tax reduction now makes it more economical for the firm to stay. Certainly, the larger the tax reduction, the

more likely a firm is to remain in that city. If the firm stays, the city would avoid loss of jobs and tax revenues, both of which would be magnified by the multiplier effect.

In terms of prior research, there is a considerable economics literature which indicates that appropriately-structured *state* tax incentives can attract business (c.f., Bartik, 1991). On a more localized scale, Ham, Swenson, and Imrohoroglu (2011) find that state-sponsored enterprise zones (which give tax breaks to businesses located in very tightly defined areas throughout states and within cities) are also effective in spurring economic growth and job creation.

There is less evidence on the effectiveness of *city* tax incentives. Although there are a large number of anecdotal cases illustrating the effectiveness of *negotiated municipal incentives* (reduced sales and property taxes, low interest financing, fast tracking of permits, etc.), there is less published research[15] on *statutory municipal tax benefits.* Bartik (1991) gives a broad examination of previous empirical work measuring the effectiveness of local fiscal variables on economic development. His conclusion is that the general results of these studies indicate that local expenditures and taxes result in a statistically significant impact on economic development. Anderson (1990) found that Michigan areas which offered tax increment financing (TIF) experienced higher growth than areas which did not. Wasmer (1994) found ambiguous results of the effects of local incentives in the Detroit area. Luce (1994) found that local taxes had a statistically significant influence on location of firms in the Philadelphia area. Dardia (1998) found that TIF increased assessed values within a California city. Wasmer and Anderson (2001) examined 112 Detroit area cities and found that some forms of incentives affect the local value of commercial and manufacturing property.

Surveying the literature, Wasmer and Anderson (2001, p.133) write: "We conclude that there are both theoretical and empirical reasons to believe that local fiscal variables and development incentives can alter the intra-metropolitan location of business firms."

[15] I had previously performed a non-published study for Mayor Villagairosa's office on the potential impact of a tax holiday. The analysis is not directly comparable to the analysis conducted in this Report since I did not have access to LATX data.

Required Conditions for Business Tax Reductions to Be Effective

More favorable tax structures could be an incentive for firms to locate in Los Angeles. As discussed below, if structured correctly, such tax structures could create Los Angeles job growth and result in a slight increase in City revenues. A reading of the literature suggests that the following two tests must be met for such a tax reduction to be beneficial to the City:

- New businesses resulting from lowered taxes should not "crowd out" existing businesses
- The net revenue effect to the City (after multiplier effects) must be positive

No "crowding out" of Existing Businesses

If the company moving into Los Angeles simply takes business away from existing firms, then the net gross receipts tax to the City would actually fall. Fortunately, this "crowding out" effect should only occur where the new company would compete for the same customers/clients as the existing LA-based firms—primarily local retail and services. Thus, all other types of firms (manufacturing and processing, technology, telecom, finance, etc.) as well as retailers and service providers with a sales base beyond the local area (Internet and mail order sales, and multi-state consulting, for example) would be less likely to crowd out existing business.[16]

Net Revenue Effect to the City Must Be Positive

It makes little sense for the City to reduce gross receipts taxes if it expects to lose revenue. Such revenue losses might not occur for two reasons. First, each new company has a multiplier effect on the rest of the LA economy, which in turn increases the tax base and gross receipt tax revenues. Any local firm buys some of its goods and services from local businesses, which in turn must supply this additional demand by purchasing more goods and services themselves, and new employees of all of these firms spend part of their wages on local goods and services.

Such direct, indirect, and induced output multipliers (or Type II multipliers) are estimated by the Bureau of Economic Analysis and range from 1.1 to over 3, depending on industry and location. For example, suppose a new company moves into Los Angeles

[16] Of course, "big box" retailers may crowd out smaller retail firms.

and its industry multiplier is 2. If the new company generates $1 million in gross receipts for the year (which would not be taxable), another $1 million of gross receipts would be generated. Because multipliers for output (gross receipts) are always greater than 1, gross receipts taxes generated (assuming the "crowding out" effect does not occur) can be positive even with the tax reductions.

The second reason for why net revenue losses might not occur is the increase in other city taxes. In particular, a new company buys and sells tangible personal property, some of which would be subject to the City's 1% sales tax. The multiplier effect works here as well; the new company's suppliers make additional sales-taxable purchases, as do employees from these companies. Other smaller taxes and fees may increase, and to the extent the new company does new construction which increases property values, the City's property tax revenues could increase as well. Property taxes could also increase from the impact of increased demand for properties, both residential and commercial, on property valuations.

Theory: Can A Business Tax Reduction Be Revenue Neutral?

In the following model I examine the potential City revenue effects for the case of a single firm. The analysis can be extended to all Los Angeles firms by simply multiplying the results by all firms operating in the City. Although we can examine a variety of business tax reductions, for illustrative purposes, I assume a complete exemption for any firm from the gross receipts tax, and assume that this exemption is sufficient to induce a firm, at the margin, to locate in Los Angeles. I examine only the rippled through effects of additional sales tax collections as an example, noting that the example can be generalized to overall business tax collections.

A key concept here is the multiplier effect. The theory and evidence supporting multiplier effects have been used in economics for approximately 100 years. The basic idea is that a firm buys foods and services from other firms, which is known as a direct multiplier effect. These firms, in turn, buy goods and services from other firms, or an indirect effect. Finally, employees from all firms spend in the economy, creating an induced effect. The

sum of the direct, indirect, and induced effects, referred to as Type 2 multipliers[17], are regularly estimated by the BEA (Bureau of Economic Analysis) both nationally and by geographic sub-regions, by industry. Such multipliers are estimated for output (sales), net income, and labor. For example, if an industry's employment multiplier is 2.5, that means that each new job that industry creates, 2.5 jobs will result. In the analyses of the Proposals which follow later in this Report, I use Type 2 multipliers for 60 sectors for California which I purchased from the BEA.

Moving on to the example, let City tax revenues from the gross receipts tax (assuming an average rate of .004 times gross receipts) be:

$$TR_g = .004GR \,, \tag{5}$$

and the elasticity of additional gross revenues (GR) to changes in the gross receipts tax rate τ_{gr} is[18]:

$$\epsilon_g = (d\,GR)GR^{-1} / (d\,\tau_{gr})\,\tau_{gr}^{-1} \tag{6}$$

Note that elasticity is a commonly-used term in economics. Elasticity measures the percent change in one variable, in response to a percent change in another variable. By using percent changes (as opposed to overall changes in a variable), we can standardize the unit of measure. For example, suppose a city has a $10 tax on each $1,000 in sales that a company has. Before the tax change, the city's businesses have 100 employees. Suppose then that the city changes the tax to $9 per $thousand, and after this change, we see that businesses, as a result of the tax change, now employ 103 people. The percent change in the tax is -10% (or $9-$10/$10), and the percent change in employment is 3% (or 103-100/100). The elasticity here is -.3 (or 3%/-10%).

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[17] For a detailed discussion, as well as an application to California tax policy, the reader is referred to M. Moore and C. Swenson (1987), "On the Use of Input-Output Analysis in Tax Research" (*Advances in Taxation*, 2007), available on my website at (click on "research") at http://www.marshall.usc.edu/faculty/directory/cswenson

[18] The "d" notation represents a total derivative used in calculus, which is a change in some variable.

The literature indicates an elasticity of approximately -.21 for local taxes. That is, each per cent reduction in the rate results in an increased .21% of investment[19]. Assume a new company has, on average, a 10 year investment horizon. As an example of how this works, assume that a three year business tax holiday for new firms is given. Thus, a three year-exemption from tax is the equivalent of a 30% reduction in taxes (ignoring the time value of money). Accordingly, the three-year exclusion yields a change of .063. Assuming an average Type II output multiplier of 2[20], an average gross receipts tax of .004, the "rippled through" increase in tax revenues from gross receipts taxes (dropping the GR term), or TR_g, is:

$$d\,TR_g/d\,\tau_{gr} = 2(.063(.004))=.00504\,. \qquad (7)$$

The rippled through effect for tax receipts from sales taxes, TR_s, is as follows. The City sales tax rate is 1%. Swenson (2005) estimates the average percent of revenues spent by businesses on tangible personal property (TPP) is 20%; conservatively estimating that half of this is exempt from sales tax (due to resale exemptions, etc.) we have 10%. From the Bureau of Labor Statistics (BEA), I estimate that consumers spend 95% of income, and of that spending, 30% is spent on TPP. Assuming a 50:50 share of the above multiplier effect (based on national transactions tables from BEA), and applying the above multiplier and elasticity of output, we have (again, dropping the GR term)

$$d\,TR_s/d\,\tau_{gr} = .5[2(.063)(.1)(.01) + .5[2(.063)(.3)(.01)]=.00252. \qquad (8)$$

The total increase in tax revenues is (7) + (8), or .00756.

The foregone gross receipts tax revenue is .004, assuming an average gross receipts tax rate of .004. Since this is less than the gain in revenue of .00756, a three-year exclusion from the gross receipts tax does not lose revenue, under the above assumptions.

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[19] Investment is broadly defined as increased business activity including increased plant and equipment, property, payroll, and sales activity.

[20] This 2 multiplier is very conservative and is just used here as an example. In reality, the average multiplier for LA businesses is approximately 2.35, using the California 60 sector RIMS multipliers from the Bureau of Economic Analysis (BEA). The reader is referred to www.bea.gov/bea/regional/rims/

Testing the Effects of Previous Los Angeles Business Tax Holidays

To calibrate potential changes to employment and tax revenues resulting from proposed changes to the business tax, actual observed effects resulting from prior changes to the LA business tax are useful. Reductions in the LA business tax reduce operating costs. For firms already operating in LA, such cost reductions should result in increased investment, which results in increased sales and employment. For firms considering moving out of, or downsizing operations, lowered taxes should likewise result in increased sales and employment. Finally, subject to transaction costs, a lowered tax burden should result in firms moving to LA. Although the above literature suggests elasticities of approximately .21 for city tax reductions, estimating such elasticity for LA is useful for more specific calibration here.

To my knowledge, there have been no previously-published empirical studies testing the impacts of city gross receipts tax holidays. Fortunately, LA enacted two relatively significant tax holidays in the last decade which we can use as "natural experiments." Effective January 1, 2001, a "new business" holiday was made effective for all firms with gross receipts of less than $500,000. The holiday applies only in the first two years of operations. In July 2006 (effective January 1, 2007) the small business tax exemption was doubled to $100,000 of annual gross receipts. If these measures were effective, we would expect to see the number of LA firms, and related employment, increase after enactment.

It is important to note that LA also enacted a number of other tax reforms which are more problematic to test. For example, tax reductions to certain industries (e.g., motion pictures) may or may not be generalizable to all LA firms. Also, gradual 15% reductions in tax rates starting in 2006 are relatively small and more importantly, because they occurred in succession, analyzing the effects of rates of change from one year to the next is more difficult to isolate. Also, there is not yet enough data to test very recent law changes (e.g., the three-year new business exemption).

Data

To test the effectiveness of these law changes, I use two databases: the LATAX data from the City of Los Angeles, and the 2009 National Establishment Time-Series (NETS) Database. The LATAX database contains firm-specific data on all taxes paid to the City from 2001 to 2010, and also includes firm specific information[21] such as name, address, taxable gross receipts, etc. The NETS database is a unique, firm specific database derived from the Dun & Bradstreet data, the latter of which is used commercially. This data set became available to academics in 2007. The 2008 NETS Database includes an annual time-series of information on over 36.5 million U.S. establishments from January 1990 to January 2010. Since the current Database is based on annual "snapshots" taken every January of the Dun and Bradstreet data, it reflects the economic activity of the previous years. The Database is as close to an annual census of American business as exists.

Unlike other program-readable annual firm databases (such as Standard and Poor's Compustat), NETS reports exact geographic locations of the firm and of its subsidiaries. Also, it shows dates of location move (and where moved to) so we can examine location choices of firms both before and after SSF is adopted in a state. One valuable aspect of the NETS Database is the 8-digit SIC classification system (over 18,500 industries) that allows the researcher to "drill down" to specific sectors of interest (well below the 4-digit SICs). A number of academic papers have begun to use this database.[22] The reliability of Dun and Bradstreet data, which underlies the NETS data, is considered high since this database has been in existence for many years.

This data allows me to identify Los Angeles firms, versus other California firms, the number of such firms, their employment, sales, and other firm-specific information. I examine only businesses with employees, since some (a relatively small percent) of businesses are simply "paper" entities.

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[21] To preserve confidentiality the database provided by the City did not include Social Security numbers or Federal Employment Identification (FEIN) numbers. A confidentiality agreement is in place between myself and the City.

[22] See C. Swenson (June, 2010) "On the Effectiveness of Single Sales Factor Apportionment For State Taxation" (click on my website under "research" at http://www.marshall.usc.edu/faculty/directory/cswenson) See also Nancy Wallace (UC Berkeley) "Agglomeration Economies and the HiTech Computer Sector": http://repositories.cdlib.org/iber/fcreue/fcwp/292 and "The Role of Job Creation and Job Destruction Dynamics" in Glaeser & Quigley, Housing Markets and the Economy (2009). Also see Kolko and Neumark (2010) "Do Enterprise Zone Create Jobs? Evidence from California's Program" *Journal of Urban Economics.*

Differences Between LATAX and NETS Databases

There are significant differences between the two databases. LATAX has information on firms which pay business taxes to LA, whereas NETS is a national database. NETS is based in part on voluntary participation by firms to a mailed Dun & Bradstreet survey and, accordingly, participation is much smaller for very small firms (this is apparent later as the number of firms with sales under $100,000 is much smaller than under LATAX). NETS also allows use of establishment level data. An advantage of data at this level is that it can capture expansion or contraction of a firm which adds or closes a location, which is not easily captured using firm-level data. As a practical matter, many small firms have only a single establishment, so this drill-down level of data becomes more meaningful at larger firm sizes. Both LATAX and NETS have exact location, name, revenue, and SIC/NAICS code data, but only NETS has employment data. The differences allow for "triangulation" in the sense that we can use both to estimate potential economic impacts of LA business tax changes. Also, LATAX data includes establishments which pay taxes to Los Angeles but are outside of the City limits. In contrast, NETS data allows me to precisely identify only establishments within the City of Los Angeles borders, potentially allowing a more precise impact analysis of LA tax policies on only LA-based firms.

Method Of Analysis

For both the 2001 and 2007 tax reductions, I examine aggregate firm (or establishment-level) data. Specifically, I look at differences in trends in Los Angeles firms before and after the tax change, and compare that difference in trend to the calculated difference in trends for a control group. The difference-in-the-difference in trends between the Los Angeles firms, and the control group, is assumed to be the result of the tax change. This "differences in differences" (DID) approach is widely used in economics[23].

[23] See my work with Ham and Imrohorglu (2011) cited in the references. Note that under the DID method, as with this study, we examine the shortest interval feasible after the change. For example, in examining the impact of a 2001 tax change, we examine 2001 but do not examine later years since they may be tainted by other economic effects having little to do with the tax change.

The 2001 New Business Exemption

To examine the impact of this law change, I look at the economic impact immediately before and after the law change. Both LATAX and NETS data are used.

Using LATAX Data

Data, using the NETS database, for firms under $500k in sales (i.e., firms affected by the policy), are shown in Table 4.

Table 4

Los Angeles Companies With Sales Under $500,000[24]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	243,882		86,560	
2000	260,220	6.70%	93,037	7.48%
2001	284,605	9.37%	101,187	8.76%
2002	341,025	19.82%	123,387	21.94%

To evaluate the employment growth for LA based firms subject to the new business exemption, we compare such firms' growth to control groups. To control for trends we compare changes in changes to the affected LA firms versus changes in changes to the control group. One such group would be other LA firms, i.e., LA firms with sales in excess of $500,000. Data for this group of larger LA based firms is shown in Table 5.

[24] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data. These firms may have had some reported sales outside of Los Angeles. In that case, their Los Angeles sales are clearly under $500k, qualifying them for the exemption.

Table 5

Los Angeles Companies With Sales Over $500,000[25]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	1,066,773		36,667	
2000	1,151,759	7.97%	39,191	6.88%
2001	1,174,548	2.00%	40,308	2.85%
2002	1,189,401	1.26%	40,783	1.18%

Prior to the exemption (from 1999-2000), LA firms with sales under $500k experienced a 6.7% employment growth. After the exemption, they experienced a 9.37% employment growth. Thus, the change, after controlling for the previous year's trend, was a 2.67% job increase. Prior to the exemption (from 1999-2000), LA firms with sales over $500k experienced a 7.97% employment growth. After the exemption, they experienced a 2.0% employment growth. Thus, the change, after controlling for the previous year's trend, was a 5.97% job decrease. Thus, comparing the two groups of LA firms, the firms with sales under $500k experienced an 8.64% job increase (or 2.67% minus -5.97%).

If, instead of employment, we use number of establishments, we get the following. Prior to the exemption (from 1999-2000), LA firms with sales under $500k experienced a 7.48% growth in the number of establishments. After the exemption, they experienced an 8.76% growth in firms. Thus, the change, after controlling for the previous year's trend, was a 1.28% increase. Prior to the exemption (from 1999-2000), LA firms with sales over $500k experienced a 6.88% growth in the number of establishments. After the exemption, they experienced a 2.85% growth in the number of establishments. Thus, the change, after controlling for the previous year's trend, was a 4.03% decrease. Thus, comparing the two groups of LA firms, the firms with sales under $500k experienced an 5.31% increase (or 1.28% minus -4.03%).

If we use instead other California firms, not based in LA, but based in other Metropolitan Statistical Areas (MSAs) and with sales of under $500k, we get the following. As shown in Table 6, these firms experienced 7.71% and 7.31% growth in employment from 1999-

[25] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

2000 and 2000-2001, respectively. Thus there was a .4% decline, after controlling for trend, after 2000. Comparing them to the LA-based firms with sales of under $500k, we see the latter experienced a relative growth of 3.07% after the exemption.

Table 6

All Other California Companies (located in MSAs) With Sales Under $500,000[26]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	1,248,360		447,614	
2000	1,344,552	7.71%	486,325	8.65%
2001	1,442,837	7.31%	520,204	6.97%
2002	1,695,783	17.53%	615,837	18.39%

Averaging the above two comparisons, the new exemption was associated with a 5.86% direct job growth in firms with sales of under $500k. There were 93,033 establishments, and a 5.86% job growth translates into 8,450 jobs associated with the change. The average RIMS Type II multiplier associated with such firms is an average of 2.35, and the rippled through job growth was 19,858.

Although not used as a comparison group, data for large, non-LA based firms is not without interest, and is shown in Table 7.

Table 7

All Other California Companies (located in MSAs) With Sales Over $500,000[27]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	5,639,995		191,606	
2000	6,117,615	8.47%	206,645	7.85%
2001	6,336,846	3.58%	211,614	2.41%
2002	6,434,782	1.55%	215,287	1.74%

[26] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

[27] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

A major strength of examining the change in *all firms* with sales under $500,000, as opposed to examining only new firms with sales under $500;000 which started business after the tax holiday, is that we control for potential crowding out effects. That is, if the net number of firms increased, any effects of crowding out must be small. However, we can re-analyze the data examining only new firms (with sales under $500,000) starting in Los Angeles before and after the law change.

Table 4a replicates Tables 4, except it only includes firms new to Los Angeles.

Table 4a

***NEW* Los Angeles Companies With Sales Under $500,000[28]**

Year	Total Employment of New Firms in First Year of Operations	% Change Over Prior Year
1999	71,566	
2000	99,999	39.73%
2001	161,341	61.34%

Table 4a shows that for new LA firms, the relative change in employment growth was 21.6% after the exemption, or 61.34%-39.73%. Table 6a replicates Table 6, except it only includes NEW firms in other California MSAs.

Table 6a

All Other *NEW* California Companies (located in MSAs) With Sales Under $500,000[29]

Year	Total Employment of New Firms in First Year of Operations	% Change Over Prior Year
1999	421,387	
2000	574,562	36.35%
2001	738,294	28.50%

[28] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.
[29] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Table 6a shows that for new non LA firms, the relative change in employment growth in 2001 was a decline of 7.85%, or 28.5%-36.35%. Comparing LA firms to non-LA firms, we see that LA-based firms' change in 2001 employment growth was thus 29.46% higher. These results show a much more dramatic effect of the 2001 tax holiday than shown in Tables 4-6, but again, the reader is cautioned that these do not measure whether some crowding out of existing firms may also have occurred. It is worth noting that we cannot compare 2001 employment growth for LA firms with sales over $500,000, since according to the NETS data, there were no new establishments created by these firms in 2001.

Using LATAX Data

Although LATAX data does not have employment data, we can use it to examine growth in the number of firms affected by the new policy. Table 8 shows data for firms affected by the policy, and Table 9 shows data for larger LA firms.

Table 8

Companies With Taxable Gross Receipts Under $500,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid	% Change Over Prior Year	Number of Companies Filing[30]	% Change Over Prior Year
1999	$15,040,238,451		$54,969,796		192,279	
2000	$16,387,128,720	8.96%	$59,485,513	8.21%	196,924	2.42%
2001	$16,083,228,926	-1.87%	$56,140,440	-5.62%	215,316	9.34%
2002	$17,417,628,125	8.30%	$57,773,598	2.91%	249,001	15.64%

[30] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Table 9

Companies With Taxable Gross Receipts Over $500,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid	% Change Over Prior Year	Number of Companies Filing[31]	% Change Over Prior Year
1999	$94,034,376,187		$231,044,675		28,749	
2000	$98,923,937,959	5.20%	$248,388,341	7.51%	29,951	4.18%
2001	$108,396,461,836	9.58%	$272,579,760	9.74%	33,281	11.11%
2002	$114,925,863,066	6.02%	$278,511,063	2.18%	33,935	2.00%

To control for trends we compare changes in changes to the affected LA firms versus changes in changes to the control group. Taxable gross receipts and taxes paid should be interpreted with caution, since both would be expected to decline after the exemption, which is what we observe. Prior to the exemption (from 1999-2000), the number of LA firms with sales under $500k experienced a 2.42% growth. After the exemption, there was a 9.34% sales growth. Thus, the change, after controlling for the previous year's trend, was a 6.92% increase in the number of firms. Prior to the exemption (from 1999-2000), the number of LA firms with sales over $500k grew 4.18%. After the exemption, there was a 11.11% growth. Thus, the change, after controlling for the previous year's trend, was a 6.93% increase. Thus, comparing the two groups of LA firms, the number of firms with sales under $500k experienced no increase.

It is important to note that starting in 2001, the Office of Finance increased compliance (partly as a result of AB 63) through discovery measures. The Tables below replicate Tables 8 and 9, except they only include firms which were not part of the discovery process.

[31] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Table 8a

Companies With Taxable Gross Receipts Under $500,000

Firms NOT as a Result of Discovery

Year	Gross Receipts	% Change Over Prior Year	Tax Paid	% Change Over Prior Year	Number of Companies Filing[32]	% Change Over Prior Year
1999	$14,645,651,945		$52,762,075		186,460	
2000	$14,920,217,971	1.88%	$56,183,325	6.48%	186,423	-.01%
2001	$15,120,390,211	1.34%	$51,096,932	-9.51%	193,262	3.67%
2002	$15,880,253,292	5.00%	$50,970,753	-.21%	209,155	8.29%

From 2000 to 2001 these firms had no growth in gross receipts. On the other hand, the number of firms in this category grew, after controlling for trend, by 3.68%.

[32] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Table 9a

Companies With Taxable Gross Receipts Over $500,000

Firms NOT as a Result of Discovery

Year	Gross Receipts	% Change Over Prior Year	Tax Paid	% Change Over Prior Year	Number of Companies Filing[33]	% Change Over Prior Year
1999	$91,604,856,248		$221,484,245		28,010	
2000	$97,214,141,384	6.55%	$238,987,899	8.15%	29,124	4.00%
2001	$105,432,421,924	8.25%	$260,039,868	8.79%	30,378	4.31%
2002	$110,697,912,667	5.71%	$264,369,986	1.54%	31,516	3.75%

From 2000 to 2001 these firms had 1.7% growth in gross receipts after controlling for trend. Clearly, they grew more than the under-$500k firms in terms of gross receipts. On the other hand, the number of firms in this category grew, after controlling for trend, by .31%. By comparison, (controlling for trend) growth in the under $500k firms was 3.35% higher.

Overall Analysis

The 2001 new business exemption appears to have created economic growth, although the two databases provide different pictures. The NETS database indicates average employment and number of establishment growths of 5.86% and 4.135%, respectively. The LATX data shows no growth in the gross receipts but positive growth in the number of firms. Elasticities are as follows. First, if we assume a 10-year investment horizon, then (ignoring the time value of money) a one-year tax exemption is equivalent to a 10% tax decrease (note that the law change allowed a two-year exemption, but because we

[33] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

are examining a single year only, this is equivalent to a 10% change). For employment, since employment increased 5.86%, we get a labor elasticity (with respect to each percent change in tax) of .586. After taking into account industry multipliers, this results in an overall elasticity of 1.35. For number of establishments, if we simply average results for NETS and LATAX, growth is 2.07%, which implies an elasticity of .207. After taking into account industry specific multipliers, this becomes .475.

2007 Small Business Exemption Increase

Effective January 1, 2007 the small business exemption was doubled to $100,000[34]. It is important to recall that our most recent recession started in late 2007, so we would expect a drop-off in economic activity (number of firms, sales, and employment) in 2007 in general.

Using NETS Data

To evaluate the employment growth for LA based firms subject to the small business exemption, we compare such firms' growth to control groups. To control for trends we compare changes in changes to the affected LA firms versus changes in changes to the control group. It is important to recall that 2007 was the start of the Great Recession so we would expect to see economic decline in general. Table 10 shows data for firms affected by the new policy, i.e, those having sales below $100,000.

Table 10

Los Angeles Companies With Sales Under $100,000[35]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	87,667		63,726	
2006	97,847	11.61%	72,063	13.08%
2007	105,654	8.00%	76,386	6.00%
2008	120,034	13.61%	88,125	15.37%
2009	134,543	12.09%	98,624	11.91%

[34] It applies to companies having global sales of under $100k.

[35] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

One control group would be other LA firms, i.e., LA firms with sales in excess of $100,000. Data for these firms is shown in Table 11. Prior to the exemption (from 2005-2006), LA firms with sales under $100k experienced a 11.61% employment growth. After the exemption, they experienced an 8.0% employment growth. Thus, the change, after controlling for the previous year's trend, was a 3.61% job decrease. Prior to the exemption (from 2005-2006), LA firms with sales over $100k experienced a -.26% employment decline. After the exemption, they experienced a 2.07% employment growth. Thus, the change, after controlling for the previous year's trend, was a 2.33% job increase. Thus, comparing the two groups of LA firms, the firms with sales under $100k experienced a 5.94% job decrease (or 3.61% plus 2.33%).

Table 11

Los Angeles Companies With Sales Over $100,000[36]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	1,404,225		135,299	
2006	1,400,613	-.26%	139,812	3.34%
2007	1,429,657	2.07%	144,159	3.11%
2008	1,414,663	-1.05%	154,335	7.06%
2009	1,430,485	1.12%	169,501	9.83%

If we use instead, as a control group, other California firms, not based in LA, but based in other MSAs and with sales of under $100k, we get the following. Data for these firms is shown in Table 12. These firms experienced 9.49% and 6.72% growths in employment from 2005-2006 and 2006-2007, respectively. Thus there was a 2.77% decline, after controlling for trend, after 2006. Comparing them to the LA based firms with sales of under $100k, we see the latter experienced a relative decline of .84% after the exemption.

[36] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Table 12

All Other California Companies (located in MSAs) With Sales Under $100,000[37]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	432,775		323,122	
2006	473,863	9.49%	356,916	10.46%
2007	505,727	6.72%	372,742	4.43%
2008	561,236	10.98%	418,229	12.20%
2009	632,072	12.62%	475,594	13.72%

Averaging the above two comparisons, the small business exemption was not associated with any detectible job retention/creation. When we use the number of establishments, instead of employment, we find more encouraging results, with a net growth of 5.76% (comparing small firm growth to larger firm growth).

Although not serving as a control group here, data on all other larger California firms is not without interest, and is shown in Table 13.

Table 13

All Other California Companies (located in MSAs) With Sales Over $100,000[38]

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	7,310,623		658,447	
2006	7,364,327	.73%	680,797	3.39%
2007	7,378,538	.19%	696,081	2.25%
2008	7,374,663	-.01%	739,180	6.91%
2009	7,369,214	0.0%	813,959	10.11%

[37] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

[38] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Using LATAX Data

Data for affected firms, using LATAX data, is shown in Table 14. To evaluate the sales and number of firm growth for LA based firms subject to the new business exemption, we compare such firms' growth to control groups. To control for trends we compare changes in changes to the affected LA firms versus changes in changes to the control group; here, the control group is LA firms with sales in excess of $100,000. Data for these firms is shown in Table 15.

Table 14

Companies With Gross Receipts Under $100,000[39]

Year	Gross Receipts	% Change Over Prior Year	Tax Paid[40]	% Change Over Prior Year	Number of Companies Filing[41]	% Change Over Prior Year
2005	$6,434,533,390		$26,765,944		311,255	
2006	$6,680,098,710	3.82%	$25,486,724	-4.78%	330,671	6.23%
2007	$6,979,040,365	4.48%	$16,023,454	-37.13%	336,688	1.82%
2008	$6,959,625,453	-.28%	$11,130,533	-30.54%	326,750	-2.95%
2009	$6,990,375,702	.44%	$9,744,993	-12.45%	317,099	-2.95%

[39] See above note. Note also that, unlike for firms with sales under $500k, I did not have access for firms over $100k versus under $100k in terms of those based on discovery versus non-discovery.
[40] Tax paid does not include interest and penalties.
[41] See Note 33.

Table 15

Companies With Gross Receipts Over $100,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid[42]	% Change Over Prior Year	Number of Comp-anies Filing[43]	% Change Over Prior Year
2005	$162,569,631,851		$372,618,303		121,643	
2006	$175,727,718,188	8.09%	$395,518,584	6.15%	130,481	7.27%
2007	$194,430,753,689	10.64%	$411,071,954	3.93%	137,181	5.13%
2008	$206,561,747,814	6.24%	$417,585,328	1.58%	141,181	2.92%
2009	$212,417,857,838	2.84%	$396,325,299	5.09%	143,529	1.66%

Since we would expect taxable gross receipts and tax collections to go down for the small firms, data for these two variables are shown for general information only. A more meaningful statistic is the number of firms. The number of firms shows no measureable growth. Prior to the exemption (from 2005-2006), the number of LA firms with sales under $100k experienced a 6.23% growth. After the exemption, there was a 1.82% sales growth. Thus, the change, after controlling for the previous year's trend, was a 4.41% decrease in the number of firms. Prior to the exemption (from 2005-2006), the number of LA firms with sales over $100k increased 7.27%. After the exemption, there was a 5.13% growth. Thus, the change, after controlling for the previous year's trend, was a 2.14% decrease. Thus, comparing the two groups of LA firms, the number of firms with sales under $100k experienced a 2.27% decrease (or 4.41% minus 2.14%).

Overall Analysis

The 2007 new business exemption appears to have had little measureable impact on job creation in the City. It is important to remember that the Great Recession began in late 2007 and may have had a disproportionate effect on small firms. It is also important to realize that during this same time, overall City tax rates were falling, so any comparisons to other LA based firms may have been misleading. Tax rates were reduced by 3.1% in

[42] Tax paid does not include interest and penalties.

[43] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

2006, and 4% in 2007. Also, the firms affected by the 2007 exemption were very small, primarily composed of sole proprietorships which historically have a high birth and death rate, relative to other firms. Further, sole proprietors' location choice decisions are often primarily driven by proximity to where they live.

On the other hand, there is some evidence of growth in the number of firms. Averaging the LATAX and NETS result, we get a 2.88% growth rate. Estimating the elasticity associated with this is not straightforward. If we assume that any particular firm never has more than $100,000 in gross receipts, this amounts to a 100% tax cut, in which case the elasticity is -.0288. However, it is more likely that an average firm would eventually grow such that they would no longer be subject to the exemption, in which case the tax reduction is less than 100%. Accordingly, the elasticity estimate of -.0288 would certainly increase.

Overall Discussion of 2001 and 2007 Law Changes

The fact that the 2001 tax holiday created LA businesses and jobs is encouraging given that the benefits were really quite modest, i.e. applying to new business for a single year[44]. By comparison, the proposed new business tax reductions would apply for a number of years. As discussed above, the 2001 holiday is probably more representative of an expected response (at least, until data from more recent changes becomes available) than the 2007 change for a number of reasons, including the large impact of the Great Recession.

This "natural experiment" will then become a baseline for predicting job and firm growth, as well as net revenue effects, for the various Proposals. To recap, the 2001 changes, which affected a very broad set of firms, resulted in a direct labor elasticity (with respect to each percent change in tax) of -.586. For number of firms, there was a direct elasticity of -.207. Recall that previous studies of municipal tax changes found an average direct elasticity of about -.21. Taking all of the above into account, I assume that the average "business expansion" elasticity related to changes in the LA business tax is -.26. This elasticity, in conjunction with Equations (2) trough (4), will be used to estimate the impact

[44] The 2001 exemption applied to the first two years of operations, but here we examine just its first year effect.

of the Proposals, discussed next. In all of the following estimates, I caution that confidence intervals should be applied; that is, estimates of indirect revenue gains and employment changes could fluctuate in the range of plus or minus 10 percent to plus or minus 30%. Note also that all job and revenue predictions are ceteris paribus; that is, they assume no major economic downturns, force majeure, major changes to other City revenues, etc. events will occur.

Analyses of Proposals

Foreword: Estimated Employment and Revenue Effects, and Confidence Intervals

The following pages analyze eight separate Proposals by BTAC. For each Proposal, the potential increase in employment and increase in general tax revenues for the City are estimated. In each Table, employment effects are total, not annual. That is, if 20,000 incremental jobs are estimated to be created, this is the long run *total* effect; it is *not* 20,000 new jobs created *each year*. In contrast, in each Table, revenue effects are *annual*. For example, if the estimated loss in business taxes reported is $10 million, it would be $10 million each year. Similarly, an estimated indirect revenue gain of $10 million in a Table would be a gain each year. Indirect revenue gains are estimated from Equations (1) through (4), as appropriate.

For every such *employment* estimate there is at least a 5% confidence interval; that is, actual results can reasonably be expected to be 5% lower or higher. The 5% confidence interval relates to the fact that elasticity estimates from the 2001 law changes are themselves subject to 5% confidence intervals. In addition, projected indirect revenue gains, independent of elasticity estimates, have their own independent confidence intervals. For each of the Proposals, the confidence interval for *indirect revenues* is at least 10% (or adding together 5% each for elasticities for employment and revenues). For some Proposals, this confidence interval for indirect revenues is larger, depending on how large of a change in tax rates is proposed.

It is important to note that estimated employment and revenue effects will take time to occur. The following is an estimate of such timing:

•Increase in employment: starting in the first year of tax change, and fully complete in five years.

•Increase in other City revenues:

•Sales tax: starting immediately after law is signed, and fully complete in five years.

•Utility tax: starting immediately after law is signed, and fully complete in five years.

•Licenses: starting in first year of tax change, and fully complete in five years.

•Power revenue transfers: starting one year after law is signed, and fully complete in five years.

•Property taxes on unsecured property: starting immediately after law is signed, and fully complete in five years.

•Property taxes on secured property (real estate): starting one year after law is signed, and increasing roughly equally each year until fully complete in five to ten years.

•All other revenues: starting in first year of tax change, and fully complete in five years.

Property tax revenues from real estate will be the slowest in realization due to the limits of Proposition 13. That is, buildings can only increase in assessed value by 2% per year until sold. Accordingly, property tax revenues will be subject to turnover rates in commercial and residential rental realty.

Reduction in Rates for Classes 6-9

This Proposal calls for a reduction in tax rates for Classifications 6 – 9 which include, but are not limited to, Professional Services Firms, Telemarketers, Collection Agencies, Brokers and Personal Services Firms, from tax rates of Classes 6 (0.255%), 7 (0.315%), 8 (0.356%) and 9 (0.507%). The impact of a 0.10%, 0.15%, 0.20% and 0.25% tax rate for all taxpayers falling within those classifications is examined.

As a baseline for analysis, the following table shows, by Class, number of taxpaying firms, gross receipts, business taxes paid, and estimated employment[45] for 2009. For this and the other Proposals, I use 2009 as the base year since 2010 data is not yet complete.

[45] Employment is from the 2009 NETS database.

Table 16

Baseline Data for Classes 6-9

Class/ Description	Number of Establishments /Firms	Gross Receipts	Taxes Paid	Number of Employees
6 Prop/Coll/Sport/Vend/Freight	7,022	$5,749,343,969	$ 10,970,170	84,159
7 Broker/Telemarketing	2,981	$781,413,204	$ 1,667,166	79,433
8 Miscellaneous Services	11,339	$4,631,983,003	$ 13,898,577	183,187
9 Professions/Occupations[46]	224,909	$55,761,426,235	$231,790,934	155,472

The Table below shows the estimated impacts on tax revenues and employment for each of the proposed business tax rate reductions. Note that the estimated direct business tax revenue effect here (and in the analyses of other Proposals) does not include potential penalties and interest (which historically averages about 7% of the principal amount of tax collected) since they fluctuate, in part due to discovery activity. On the other hand, estimated indirect revenue gains here (and in the analyses of other Proposals) do not include potential increases in the business tax due to expansion of the tax base.

[46] In this Class, some firms have multiple entities, which (in addition to differences between the LATAX and NETS data), account for the fact that there are more establishments than employees.

Table 17

Estimated Impact of Proposed Tax Rate Changes for Classes 6-9

Proposed Tax Rate (per $thousand of gross receipts)	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
$1.00	$<203,873,335>	$167,760,514/***$209,700,643***/$251,640,772	94,094
$1.50	$<176,646,577>	$163,932,055/***$182,146,728***/$200,361,400	75,850
$2.00	$<149,419,820>	$139,133,532/***$154,592,813***/$170,052,094	57,604
$2.50	$<122,193,062>	$114,335,007/***$127,038,897***/$139,742,787	39,361

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 20% for the .1 rate, and + or – 10% for all other proposed rates. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%.

Discussion

This Proposal has the capability of significant job creation. On average, depending on the proposed rate, the worst case scenario is an annual net loss to the City of $36 million, the average case is a $5 million gain, and the best case is a $48 million gain. Also, as with all other indirect revenue gain estimates, such gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time. Also, as with many of the other Proposed changes, the tax change is significant enough that the elasticities estimated from prior law changes may not apply.

Reduction in Rates for All Classes

This proposal analyzes the effect of a potential reduction in tax rates for Classifications 1 – 9, from tax rates of 0.101% to 0.507%. The impact of a 0.000%, 0.050% and 0.100% tax rate for all taxpayers falling within these classifications (i.e., all taxpayers) is examined.

As a baseline for analysis, the following table shows, by Class, number of taxpayers,

sales, business tax paid (exclusive of fees, penalties, etc), and estimated employment[47] for 2010.

Table 18 reports baseline data for these classes. It is important to note that classes 1-9 account for approximately the majority of total business tax collections; however, there are 76,584 firms in other categories which paid approximately $88 million in taxes in 2009. These firms were involved with construction, real estate sales, motion picture production, etc.

Table 18

Baseline Data for Classes 1-9

Class/ Description	Number of Establishments (Firms)	Gross Receipts	Taxes Paid	Number of Employ-ees
1 Child/Multi/Phone/ Tugboat/ Internet Service	7,801	$5,445,876,715	$4,295,603	10,878
2 Wholesale Sales	39,716	$37,798,977,694	$30,982,103	106,272
3 Rental/Swap/Meet/ Antique	54,681	$8,761,608,438	$21,295,680	35,562
4 Retail Sales	105,695	$56,722,099,655	$61,838,323	226,506
5 Radio/TV/Theater	4,262	$3,005,330,300	$3,576,708	5,659
6 Prop/Coll/Sport/ Vend/Freight	7,022	$5,749,343,969	$10,970,170	84,159
7 Broker/ Telemarketing	2,981	$781,413,204	$1,667,166	79,433
8 Miscellaneous Services	11,339	$4,631,983,003	$13,898,577	183,187
9 Professions/ Occupations[48]	224,909	$55,761,426,235	$231,790,934	155,472

[47] Employment is from the 2009 NETS database

[48] In this Class, some firms have multiple entities, which (in addition to differences between the LATAX and NETS data), account for the fact that there are more establishments than employees.

The Table below shows the estimated impacts on tax revenues and employment for each of the proposed business tax rates reductions.

Table 19

Estimated Impact of Proposed Tax Rate Changes for Classes 1-9

Proposed Tax Rate (per $thousand of gross receipts)	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
0	$<380,315,264>	$345,066,603/***$492,951,473***/$640,836919	130,583
$.50	$<304,626,223>	$281,091,377/***$374,788,503***/$468,485,629	112,517
$1	$<229,115,070>	$205,300,428/***$256,625,536***/$307,950,643	94,449

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 20% for .1 rate, + or – 25% for the .05 rate, and + or – 30% for the 0 rate. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%.

Discussion

This Proposal has the capability of significant job creation. On average, depending on the proposed rate, the worst case scenario is an annual net loss to the City of $36 million, the average case is a $70 million gain, and the best case is a $261 million gain. Also, as with all other indirect revenue gain estimates, such gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time. Also, as with many of the other Proposed changes, the tax change is significant enough that the elasticities estimated from prior law changes may not apply.

Limitation of the Maximum Total Annual Gross Receipts Tax Payable by Any Taxpayer to $2 million Per Legal Entity

The Table below shows the estimated impact on tax revenues and employment from this proposal. As shown below, there were only three legal entities in 2009 with total taxes in excess of $2 million annually. Since their combined taxes were $19,330,213, capping their taxes at $2 million would reduce business tax collections by $13,330,213. While this policy could result in an additional 466 jobs, there would be a predicted net loss to the City of over $7 million annually. Of course, the below does not take into account the possibility of a new, very large business(es) moving into Los Angeles (e.g., a professional football team).

Table 20

Estimated Impact of Proposed Limitation of Annual Tax to $2 Million Per Taxpayer

Number of Firms Affected	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/A*verage*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
3	<$13,330,213>	$5,441,608/***$6,046,231***/$6,650,854	466

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 10%. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined:10%.

Discussion

This Proposal has relatively low capability of significant job creation, and would likely lose $7 million in net revenue for the City. Of course, if the policy results in the attraction of a new, very large firm which could generate over $7 million in additional annual taxes to the City, this Proposal has merit.

Establishment of a Tax Rate of 0.101% For Companies That Establish or Maintain Their Corporate Administrative Headquarters in Los Angeles

This Proposal would create a tax rate of 0.101% for companies that establish or maintain their corporate administrative headquarters in Los Angeles so long as they either (i) employ a minimum of 200 people at their headquarters location or (ii) invest capital expenditures of at least $25 million in, and employ at least 100 people at, their headquarters location.

The Table below shows the number of firms with 200 or more employees, which also identify their corporate headquarters in Los Angeles, by year (from NETS data):

Table 21

Annual Growth in Headquartered Companies With Over 200 Employees

Year	Number of Establishments/Firms	Number of Employees
2001	319	154,387
2002	334	166,721
2003	345	175,485
2004	360	184,121
2005	363	195,467
2006	374	202,111
2007	381	211,871
2008	385	219,317
2009	385	230,805

Since such new headquarters may come from a variety of tax classes, we use an average rate to approximate what rate they would pay in the absence of the special rate. Using 2009 data, the average rate is .185. Accordingly, the .101 rate would be a 45.4% reduction. The estimated impact from this potential law change is shown in the Table below.

Table 22

Estimated Impact of Proposed Tax Rate of .101% for Certain Companies Establishing Headquarters in Los Angeles

Number of Establish-ments/ Firms Affected	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
385+	<$44,927,291>	$56,499,424/***$70,624,280***/$84,749,136	27,247

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 20%. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%.

Discussion

This Proposal has the capability of significant job creation. Here, the worst case scenario is an annual net gain of $12 million to the City, and the best case is a net $40 million gain. Also, as with all other indirect revenue gain estimates, such gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time. Also, as with many of the other Proposed changes, the tax change is significant enough that the elasticities estimated from prior law changes may not apply.

Creation of a Transit Oriented Development Incentive

Under this proposal, there would be creation of a transit oriented development incentive to reduce by 50% the City business tax rate for all businesses with up to $1 million of gross receipts located within one-half mile of MTA/Metrolink or Public transit stops excluding bus stops but including dedicated busway stops (e.g., the Metro Orange Line) for the first five years after the business commences generating gross receipts at that location; in year six, the discount declines to 40%; in year seven, 30%; in year eight, 20%; in year nine, 10%; and in the tenth year of operations, there is no reduction in the business tax rate. Over a 10-year investment horizon this results in an effective rate reduction of 35% (ignoring the time value of money)

The Table below shows the estimated impact on tax revenues and employment from this proposal. In 2009, there were 17,437 firms with gross receipts in excess of $1 million, using LATAX data. Unfortunately, 8475 of these were missing latitude/longitude data, and of the remaining, 1848 (or 21.8%) were located within a half mile of a train/major bus stop. For NETS data, there were 21,263 locations with sales over $1 million, all of which had latitude/longitude data, and 6045 (or 28.5%) were within a half mile of a train/major bus station. Total employment for these locations (in 2009) was 265,980. The firms paid an estimated total of $20.5 million in taxes.

Table 23

Estimated Impact of Proposed Creation of a Transit Oriented Development Incentive

Number of Establishments/ Firms Affected	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
6045	<$8,206,692>	$6,828,061/***$8,535,078***/$10,242,093	24,204

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 20%. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%.

Discussion

This Proposal has the capability of significant job creation. These firms tend to have larger employment which makes them attractive insofar as they tend to generate jobs and indirect tax revenues. The worst case scenario is a net $1 million (rounded) net loss to the City, on average, this would break even in terms of City revenues, and the best case scenario reflects a $2 million gain to the City. As with all other indirect revenue gain estimates, such gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time. Also, as with many of the other Proposed changes, the tax change is significant enough that the elasticities estimated from prior law changes may not apply.

Establishment of a Business Retention Incentive

This Proposal would establish a Business Retention Incentive in which, commencing with the sixth year (i.e., after 72 months have elapsed) of a business maintaining its location in Los Angeles, the taxpayer/business would receive a credit towards its current annual gross receipts taxes due equivalent to 10% of the total business taxes owed for each of years six through 10. The company would receive an additional credit on its business tax bill equivalent to 25% of the total business tax owed for each year thereafter starting with year 11 onward. Assuming a 10-year investment horizon, this is effectively a 5% tax cut (averaging over the ten years) for any particular business[49].

The Table below shows the estimated impact on tax revenues and employment from this proposal.

Table 24

Estimated Impact of Proposed Establishment of a Business Retention Incentive

Number of Esatblish-ments/ Firms Affected	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
Classes 1-9	$<19,015,760>	$22,182,813/***$24,647,570***/$27112,327	11,529

Notes: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 10%. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%. Please refer to prior tables for Class descriptions.

Discussion

This Proposal has the capability of modest job creation. More importantly, one way to view this Proposal is to assume a "but for" scenario, that is, but for the more attractive tax structure, new firms might choose to locate elsewhere. In this case the net revenue effect to the City would be strictly positive. Of course, as with all other indirect revenue gain estimates, such gains may not occur in the same year as the direct business tax

[49] Since firms may register for the tax at times different from their first presence in LA, it is difficult to gauge how long an average firm (as of this writing) has been in LA. Accordingly, I use an average here.

revenue loss, i.e., a lagged response time. Since the effective tax rate change here is within the same magnitude used to estimate elasticities from prior law changes, there is less concern about the potential range of employment impact.

Expand New Business Tax Incentive

This proposal would expand the existing new business tax incentive by amending Los Angeles Municipal Code Section 21.30 to remove the requirement that new businesses qualifying for the incentive have less than $500,000 in annual gross receipts; extend the timeframes and incentives as follows: first three years following location within the City – pay no business tax; the fourth year following location within the City – pay 1/3 of business tax otherwise due; the fifth year – pay 2/3 of business tax otherwise due; and in the sixth year – pay 100% of business tax otherwise due.

Assuming a ten year investment horizon, this is the equivalent of a 40% tax reduction. The Table below shows the estimated impact on tax revenues and employment from this proposal.

Table 25

Estimated Impact of Proposed Expansion of New Business Tax Incentive

Number of Firms Affected	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
All New, Classes 1-9	<$11,895,270>	$12,804,428/***$16,005,535***/$19,206,642	16,884

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 20%. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%.
Please refer to prior tables for Class descriptions.

Discussion

This Proposal has the capability of moderate job creation. It has the capacity to be strictly revenue enhancing as well. Of course, as with all other indirect revenue gain

estimates, such gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time. Also, as with many of the other Proposed changes, the tax change is significant enough that the elasticities estimated from prior law changes may not apply.

Business Tax Incentive for Job Creation

This proposal would create a business tax incentive for job creation in the City of Los Angeles by offering a tax credit for each new job created by businesses located within the City of Los Angeles. The tax credit would be based on the increase in year-over-year total number of persons employed by a business in the City of Los Angeles. Credits are calculated in increments of $100 per new job created on an escalating scale based on their respective assessed tax rate (e.g., $100 if assessed at $0.101 or $0.127, $200 if assessed at $0.255, $300 if assessed at $0.315, $400 if assessed at $0.356 and $500 if assessed at $0.507).

The Table below shows the estimated impact on tax revenues and employment from this proposal. To estimate this, I first calculate the (sans credit) growth in jobs, by class, from 2008-2009. I next apply the credit rates above to aggregate new employment predicted from this same trend. This credit results in percent changes in total tax, by class, to which the previous elasticities are applied.

Table 26

Estimated Impact of Proposed Business Tax Incentive for Job Creation

Number of Firms Affected	Estimated Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/*Average*/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
Classes 1-9	<$6,260,566>	$6,950,376/***$7,722,640***/$8,494,904	12,472

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 10%. Estimated revenue gains are composed of: secured property tax: 52%; unsecured property tax: 9%; utility tax: 9%; sales tax: 4%; licenses, etc.: 12%; power revenue transfers: 4%; all others combined: 10%.
Please refer to prior tables for Class descriptions.

Discussion

This Proposal has the capability of moderate job creation. The modest amount of the incremental job credits results from the relatively small incentive, relative to incentives in other Proposals. Given the potential additional "paperwork" requirements which might be involved, this proposal may not be worth additional consideration. As with all other indirect revenue gain estimates, such gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time.

Overall Observations

All of the above Proposals are expected to generate jobs. They also have the potential to be relatively revenue positive, revenue neutral, or revenue negative, but gains may not occur in the same year as the direct business tax revenue loss, i.e., a lagged response time. Additionally, for some of the proposals, the effective tax rate change is much larger than the magnitude used to estimate elasticities from prior law changes.

In terms of the timing of effects (jobs, business attraction, and revenues to the City) from any policy change, there are a number of factors at work. As shown by the 2001 law changes, timing of firms' initial responses should begin within a year of any policy changes in terms of some measurable impact on labor and number of firms doing business in the City. The resultant multiplier effects on jobs and firms should occur subsequent to this. In terms of revenue effects to the City, the direct loss in business tax revenues should occur in a year or less, depending on when the policy is made effective. Since business taxes are most often paid after the end of the calendar year for most firms, the loss would be clustered around the filing dates of returns after year-end.

Revenue gains, from increased business activity and employment, would come at staggered intervals. Increased sales taxes should occur within three to six months of increased business activity in the City. It is reasonable to expect this would occur after announcement of the tax reduction, which would mean increased sales tax collections starting to occur even before the loss in business tax revenues. Increased property tax revenues will take longer to materialize. For unsecured property (business non-realty assets), business expansion should result in some measureable tax revenue increase within the year. For property taxes related to secured property (real estate), although

increased occupancy rates should occur within a year, the resultant increase in tax valuation (and thus taxes paid) for realty will occur only as properties are revalued which (because of Proposition 13) would be expected to jump significantly only on sale or other disposition. While the initial increase in property taxes will occur slightly after a year of policy change (due to county assessor revaluations), the full impact will likely take a few years to materialize.

Increased utility user tax revenues should begin very quickly since they are collected monthly. Power revenue transfers are collected over much longer cycles and will likely take more than a year to materialize. Other revenue sources for the City, listed in Table 1, should begin to increase within a year of the new tax policy.

It is my recommendation that for any Proposals adopted, their effectiveness be evaluated a year or two after adoption. Increased employment and new businesses in the City can be estimated using the methodology used in this Report.

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About the Author

Charles (Chuck) Swenson, PhD, CPA, is Professor and Leventhal Research Fellow at the Marshall School of Business at the University of Southern California, where he has taught since 1987. Chuck has previously served as a Visiting Professor at UCLA and Caltech. Author of more than 50 academic research and professional articles on taxation which have appeared in such economics journals as the *National Tax Journal*, the *Journal of Public Economics*, and the *Journal of Law and Economics*, Dr. Swenson has won the Tax Manuscript Award from the American Taxation Association three times. He is author of two tax texts and is the General Editor of the treatise *Bender's State Taxation: Principles and Practice* (LexisNexis, 2009). He has presented his economics-based tax research before the California Senate Revenue and Taxation Committee, and the California Assembly Committee on Jobs, and is on the Editorial Board of the *Journal of Accounting and Public Policy*. His bio and curriculum vitae can be found at:

http://marshallapps.usc.edu/portal/subapps/digitalmeasures/faculty.jsp?surveyId=48871

Addendum to:

Report to the City of Los Angeles on Potential Revisions to the Business Tax (final Report dated August 3, 2011)

August 24, 2011

By Charles Swenson, PhD, CPA

►There are two minor technical corrections to the above-referenced report. Both relate to the section of the paper entitled: "Reduction in Rates for All Classes". The Report indicates that taxes paid in 2009 by all businesses NOT in Classes 1 through 9 were $88 million, when in fact this number should be $29 million. Accordingly, the percent of all business taxes paid by Classes 1->9 are over 90% (not 80%, as reported originally). This correction does not affect any analyses since only Classes 1->9 were considered in the proposed tax reductions. Also, in the related Table 18, Gross Receipts for Class 3 should be $18,761,608,438, not $8,761,608,438 (i.e., the lead "1" was omitted). This is a typo for this Table only; the correct amount was used in all analyses, and this typo did not affect any analyses.

►I performed a closer analysis of potential property tax revenues which are expected to be generated as a result of additional business activity generated through reductions in the business tax. Specifically, since there was a significant downturn in real estate values in 2008 and 2009 due to the recession, some of this might be reflected in downward assessed values as well. The reason this is important here is that under Proposition 8, such downward assessments can be very quickly valued back upward (even though they exceed the "normal" Proposition 13 2% per year upward adjustment limit), should property values increase. Such quicker upward adjustments could accelerate the predicted 5 to 7 years required for full realization of property tax revenues predicted in my original report. However, on inspection of the most recent Los Angeles County Assessor's Annual report, there was only a cumulative 6% Proposition 8 adjustment from 2008-2009 and accordingly, the there may be only a minor acceleration of the 5-7 year prediction noted above (and in the Report).

►I also looked at the potential impact on City sales tax collections from increased employment due to revisions in the business tax. Specifically, I estimated a statistical model (a regression similar to that reported in the original report) of sales tax revenues as a function of both business activity, and unemployment rates[1], from 2000 through 2010. This model has a very good "fit" in terms of its explanatory power (over 95% of City sales tax collections could be

[1] Unemployment rates publicly reported by the California EDD are for the Los Angeles MSA area, and are not broken down at the City level.

explained by the model). This analysis estimates that for each 1% reduction in unemployment rates, the City collects another $13.2 million in sales tax revenues. The result makes sense, since employed people have more disposable income, which they can spend, in part, on items subject to sales taxes. This analysis indicates that indirect revenue gains, under all Proposed changes to the business tax analyzed in the original report, should have some upward adjustment for this potential increase in sales taxes paid by individuals who might become employed as a result of business expansion. This upward adjustment should, like all other indirect revenue gains, *occur over time (as labor markets adjust) and be fully realized in five years*. The timing of this increase, within the five years, will be a function of the speed at which City unemployment is reduced.

Historically, City unemployment rates rarely fall below 4%, and the City's current jobless rate is over 12.5%. According to the Department of Labor, Los Angeles has 2.1 million people in its workforce (from an estimated population of around 4 million in 2010). Accordingly, the Estimated Annual Indirect Revenue Gain in Table 19 from the Report is increased by the estimated additional sales taxes attributable to new Los Angeles employees, and is shown below:

Table 19 (Revised 8/24/2011)

Impact of Proposed Tax Rate Changes for Classes 1-9

Proposed Tax Rate	Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/Average/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
0%	$<380,315,264>	$402,354,603/**$574,791,473**/$665,388,919	130,583
.05%	$<304,626,223>	$330,525,377/**$445,408,503**/$517,919,629	112,517
.1%	$<229,115,070>	$251,336,428/**$314,045,536**/$353,886,643	94,449

Note: estimated indirect revenue gains and employment changes may fluctuate as much as + or - 20% for .1 rate, + or – 25% for the .05 rate, and + or – 30% for the 0 rate. Estimated revenue gains are composed of: secured property tax: 45%; unsecured property tax: 7%; utility tax: 7%; sales tax: 18%; licenses, etc.: 10%; power revenue transfers: 3%; all others combined: 8%.

Note that the average incremental sales tax from new employment is calculated as follows. For the 0% tax rate, 130,583 new jobs are a 6.2% employment increase for the City. So, there would be an estimated 6.2*$13.2 million or $81,840,000 in sales tax revenues annually. In the worst case scenario, this is reduced by 30% (or $24,552,000), and in the best case, this amount is increased by 30% (also $24,552,000). These estimated increased sales tax revenues are then added to what was originally reported in Table 19, and are reflected in the above revised Table.

Similarly, for the .05% rate, the incremental 112,517 jobs are predicted to bring in an additional $70,620,000 in sales tax revenues on average, decreased/increased by $17,655,000 in the worst case/best case scenarios (i.e., a + or - 25% range). For the proposed .1% rate, the predicted 94,449 incremental jobs is estimated to bring in an additional $57,420,000 in sales taxes, reduced/increased by $11,484,000 (i.e., a + or - 20% range). These amounts are added to what was originally reported in Table 19, and are reflected in the above revised Table.

Note that the relative percents of revenue gains, reported immediately below revised Table 19, reflect the additional sales tax revenues.

Finally, the above methodology of adding sales taxes attributable to increased employment would also apply to all other Proposals listed in the Report. Since BTAC voted on August 3, 2011 to pursue only the above proposed changes, I have not recalculated indirect revenue gains for such other Proposed changes.

► I also just received the most current version of the *Kosmont/Rose Institute Cost of Doing Business Survey* (2010). Accordingly, I updated Table from the original Report to reflect new rates for the following five cites, shown below (there were no changes to other Los Angeles County cities shown in the original Table, i.e. the 2009 rates/basis of tax reported in the original Table apply to 2010 as well):

Table 3 (updated 8/24/2011; only cities with changes from Table in original Report are shown below)

Gross Receipts Tax Rates for Los Angeles County Cities

Rate per $1000 of Gross Receipts, As of 2010

City	Highest Rate	Median Rate	Lowest Rate
Manhattan Beach	.077	.077	.077
Pomona	1.41	.96	.08
San Fernando	1.32	.66	.53
Temple City	Flat Rate	Flat Rate	Flat Rate
West Hollywood	1.44	.96	.48

Note that Los Angels still stands out as the highest tax rate jurisdiction (when examining highest, median, and lowest rates) in Los Angeles County.

Table 19 (Revised 11/28/2011)

Impact of Proposed Tax Rate Changes for Classes 1-9

Proposed Tax Rate	Annual Direct Business Tax Revenue Effect	Estimated Annual Indirect Revenue Gain: Worst Case/Average/Best Case	Estimated Direct, Indirect, and Induced Employment Gain (After Type II Multiplier)
0%	$<409,315,264>	$384,615,168/**$549,450,240**/$714,285,312	118,831
.05%	$<304,626,223>	$303,991,304/**$405,321,738**/$506,652,173	102,390
.1%	$<229,115,070>	$228,625,150/**$285,781,438**/$342,937,726	85,949

Note: estimated indirect revenue gains and employment changes are expected to *occur over time*, and may fluctuate as much as + or - 20% for .1 rate, + or – 25% for the .05 rate, and + or – 30% for the 0% rate. Estimated revenue gains are composed of: secured property tax: 46%; unsecured property tax: 7%; utility tax: 7%; sales tax: 19%; licenses, etc.: 10%; power revenue transfers: 3%; all others combined: 8%. See Report dated 8/3/2011 and Addendum dated 8/24/2011 for assumptions, caveats, and methodology.

Comments on "Economic and Fiscal Effects of Eliminating the Los Angeles Business Tax" By Blue Sky Consulting Group (Report dated 3/22/12)

Prepared by Charles Swenson, PhD, CPA

April 15, 2012

Introductory Comments

Predicting the economic and fiscal impacts of a significant policy change, such as elimination of the Los Angeles Business Tax, is a very complex task. If this were an easy task, the City would not ask experts like me or Blue Sky to become involved. Because of this complexity, it is not surprising that there would be differences in the predictions by myself and Blue Sky.

Comments on Blue Sky's Results

I am flattered that Blue Sky used as a starting point many of my report's facts—same references, the regression methodology which I created to "parse out" business versus individual taxpayer components of certain taxes, etc. The major problem I find with their results is the low estimated economic impact. For example, Table 4 predicts that elimination of the tax would result in the creation of 7,640 jobs over the course of ten years. Given that there are about two million people working in Los Angeles, this is a very small number, considering it would be the outcome of eliminating a $400 million tax per year over 10 years. To put some perspective on this, just three of the "Big Four" CPA offices in Los Angeles alone have more than 7,000 employees. So, the estimate of 7,640 jobs seems considerably too low.

This low job estimate suggests that their tax revenue impacts are too low as well. My understanding of the REMI model is that the formulae this program uses to estimate jobs are also used to estimate output effects. These output effects, in turn, are used to predict indirect tax revenue gains to the city. Since the job effects are too low, the estimated tax revenue effects of $27 million will be understated as well.

It is useful to review the likely effects of a reduction in (including a repeal of) the tax. For some companies already in Los Angeles, the tax reduction would be a windfall, not causing any changes in their decisions to expand or not leave the City. The impact on Los Angeles for these firms is that some of the tax savings would be spent in the City, and through multiplier effects, would have a relatively modest effect. The larger impact would be for firms considering moving into the City, or firms considering leaving, or firms considering doing an expansion outside of the City (as opposed to inside it). Here, tax reductions will be the "tipping point" for some, resulting in very high elasticities (responses relative the tax reduction).

The Blue Sky analysis in fact assumes a very low elasticity - below 5%. Their analysis assumes that the 25% elasticity (or .25) reported in Bartik (1991), which is based on firms' reactions to a combination of state and local taxes, should be reduced since we are examining only changes in a local tax. It is not clear their extremely low elasticity is correct, for two reasons. First, the Los Angeles business tax is larger than it may appear; although it is only about .5% of sales, if this were translated into an income tax rate, assuming a company has a 10% profit margin, this would be equivalent to a 5% income tax - which is actually almost as much as many states' corporate income tax rates. Second, there is actually a much higher elasticity reported in Bartik for the few *intra metropolitan* studies which have been done. As pointed out in Bartik, when studies have examined firm responses to taxes in specific cities, firms are much more responsive than in state location decisions, since nearby cities are relatively homogeneous and tax differences are often decision-driving differentiators (which may be the case for Los Angeles versus nearby competing cities with lower tax rates).

Blue Sky's Critiques of My Study

Blue Sky suggested that because there was variability in the data I used, there is credibility issue relating to my estimates. First, it should be noted that rather than rely solely on published papers on state/local tax changes, I felt that because of the unique nature of the Los Angeles business tax, an actual empirical estimate of how firms had reacted to changes in this specific tax were called for. Yes, there was variability in the data I used; in fact, there is almost always variability in data (that is its nature). To try to "triangulate" and thus average out any variability, I used both LATAX and NETS data, and I examined two separate law changes. In the end I used a blend of results obtained from both of the data sources and tests.

Blue Sky suggests that I relied solely on a 2001 change in the business tax to predict how firms would react to other changes in the tax. In fact, I estimated a blended elasticity from 2001 and 2007 changes. And contrary to assertions, for both time periods, the comparison groups were not only other non-Los Angeles firms, but also Los Angeles firms which were unaffected by the tax changes (larger firms). Also, the assertion that the "tech wreck" of 2001 had a distortive effect on my results is not likely, since the comparison groups I used were firms from across the state, and not just the Bay Area (where the effects of the technology collapse was sharpest).

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Do City Business Taxes Matter?

October, 2012

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Abstract

There is relatively little research on whether city tax structures either attract or repel business activity. This study first documents municipal business tax rates across the United States, and finds they are a relatively significant cost to business. Next, the study examines the impact of tax rates on employment and number of establishments (both total and new to each city) across ten states over a decade, and finds that such business taxes had a significant negative impact. Finally, the study examines the economic impacts of two previous tax cuts in Los Angeles and finds that these cuts generally resulted in growth in both the number of jobs and establishments. The results have important policy implications.

Key words: city taxes; tax policy; economic development

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Do City Business Taxes Matter?

1.Introduction

Although there is considerable evidence on the effectiveness of state tax policies in terms of attracting business, there is little evidence on municipal level tax policy. Job growth is important to cities, but cities also face budget shortfalls. The question naturally arises as to whether reductions in municipal taxes can effectively increase economic activity and create jobs. The answer is not obvious. On one hand, such taxes are perceived as small relative to other state and Federal taxes, and therefore unimportant at the margin to decision makers. On the other hand, since adjoining municipalities are often very similar in terms of markets and infrastructure, differences in tax structures might be salient. This paper is the first study to systematically investigate this issue.

The study first documents municipal tax rates across the United States and finds they are a relatively significant cost to business. Next, the study examines the impact of municipal tax rates and incentives on employment, number of establishments, and number of new establishments, and finds that business tax rates have had a significant economic impact in California cities over a ten year period. A similar analysis of another nine states yields similar results. Finally, the study examines two previous tax cuts in Los Angeles using a unique database, and finds that such cuts generally had a significant positive economic impact. The results have important policy implications.

2. Prior Research

While there is a considerable economics literature indicating that *state* tax structures can affect business growth (c.f., Bartik, 1991, 1992), there is less evidence on the effectiveness of *city* tax structures. Although there are a large number of anecdotal cases illustrating the effectiveness of *negotiated municipal incentives* (reduced sales and property taxes, low interest financing, fast tracking of permits, etc.), there is less published research on *statutory municipal tax structures.* Bartik (1991) gives a broad examination of previous empirical work measuring the effectiveness of local fiscal variables on economic development. His conclusion is that the general results of these studies indicate that local taxes result in a statistically significant impact on economic development. For the few studies of intra-regional effects of local taxes on cities, Bartik suggests that because non-tax factors tend to be similar between adjoining cities (i.e., they share local labor and other markets, as well as some infrastructure), differences in

city tax structures should matter since they may be among the few distinguishing characteristics between such cities. The studies summarized in Bartik typically focused on property taxes, or on a select number of municipalities.

In the decade following Bartik's studies, research identified additional results. Wasmer (1994) found ambiguous results of the effects of local incentives in the Detroit area. On the other hand, Luce (1994) found that local taxes had a statistically significant influence on location of firms in the Philadelphia area. Wasmer and Anderson (2001) examined 112 Detroit area cities and found that some incentives affect the local value of commercial and manufacturing property. Wu (2010) examined 351 Massachusetts municipalities and found that property taxes had significant impact on business location and the related share of taxes borne. Similarly, Dye et al (2001) found that Chicagoland property taxes (and related classifications) had a negative influence on business activity. Mark et al (2000) found that sales and property taxes reduced employment growth in the District of Columbia area (DC, and nearby Virginia and Maryland communities).

This study extends the prior literature three ways:

1. Documents the aggregate amount of municipal business taxes across all U.S. cities and showing that such taxes are relatively substantial (implying that they may be salient).
2. Shows that the economic impact of municipal taxes was significant for cities in ten states.
3. Isolates and calibrates the economic impacts of city tax changes in a very large city (Los Angeles) using unique natural experiments.

3. How Significant are Municipal Business Taxes?

Cities impose a variety of taxes, licenses, and fees on business. Property taxes are generally set by state and county governments, but cities can often add a small per cent to tax bills. Similarly, sales/use taxes are set by states and counties, with cities adding a smaller amount. Although such taxes may be important, separating their incidence between businesses and individuals is challenging. The major city-imposed taxes on businesses tend to be either general business taxes, often in the form of an income tax or a gross receipts tax, or special business taxes, licenses, permits, and fees.

The structure of general business taxes varies widely by type, rate, industry, etc. To show this wide variation, consider these examples. Akron, Ohio, has a 2.5% tax on

gross payroll plus a 2.5% income tax on firms that pay a state income tax; Baton Rouge, Louisiana has a .1% tax on gross receipts (maximum tax of $2000), except that retail has a separate tax structure (maximum tax of $7500); Jacksonville, Florida has a $5 per employee tax, but retailers and wholesalers have a separate tax structure. Tucson, Arizona has a 2% tax on gross receipts, but only for retail and wholesale—and rentals have a separate tax structure.

Other business taxes, licenses, and fees also vary widely. Other business taxes include taxes on public utility gross receipts, occupancy taxes for hotel guests, parking taxes, etc. Business licenses and fees can include general and specific activity licenses, construction fees and permits, development impact fees, environmental impact fees, scheduled traffic impact fees, signalization fees, art in public places fees, major thoroughfare/bridge fees, utility user fees and taxes, etc. The sheer variation in such business taxes makes any sort of marginal rate calculation seemingly impossible. Accordingly, deriving an average effective rate seems more sensible.

To establish some perspective on whether municipal business taxes are potentially important to businesses, it is necessary first to examine their overall economic significance. To do this, tax revenues at a detailed level, by city, were collected from the *Census of Local Governments* (Bureau of the Census, various years) for 1998 through 2007. From this data, taxes, fees, and licenses imposed on business were isolated. Since larger cities will typically have larger tax collections, it is necessary to scale such collections to gauge their relative importance. We can scale business taxes as a per cent of total city tax collections, and we can also develop an overall, average effective business tax *rate*. To develop this latter statistic, we divide municipal business tax collections[1] for each state by state "business income" for that year. Business income is proprietors' incomes for that state and year reported by the Bureau of Economic Analysis (BEA).

Table 1 reports such taxes by state for 2003-7. As can be seen, the average rates of 8.835% as a per cent of total city taxes and 3.947% as a per cent of business

[1] Business taxes are (using the Census categories): Amusement License, Corporation License, Public Utility License, Occupancy and Business Licenses NEC, Corporate Net Income Tax, Severance Tax, Alcoholic Beverage License, Other License Taxes, and Taxes NEC (which on investigation of city financials turned out to be business taxes) . Although businesses also pay property and sales taxes, the aggregate data reported by Census does not break these taxes out into those paid by businesses versus individuals. Note that because the publicly-available Census dataset is aggregated at the state level, I requested and received under the Freedom of Information Act (FOI) detailed data for all sub-state governments.

incomes are relatively significant. We can also see a wide variation by state, from a low of .5% in South Dakota to a high of 11% in New York.

4. The Impact of Municipal Taxes and Incentives in California.

California is the largest state and features a wide variety of cities, and as such is a useful state to examine. The availability of two relatively new data sources enables the examination of city business taxes for this state. The first is a database that allows specific identification of business activity within precise city borders[2].Such exact locational data is important since city taxes generally can only be assessed on businesses physically located within the city's borders. The NETS database is a unique, firm-specific database derived from the Dun & Bradstreet data, the latter of which is used commercially. This data set became available to academics in 2007. The 2008 NETS Database includes an annual time-series of information on over 36.5 million U.S. establishments from January 1990 to January 2010. Unlike other program-readable annual firm databases (such as Standard and Poor's Compustat), NETS reports exact geographic locations of the firms/establishments and of their subsidiaries, as well as other variables such as sales, employment, SIC, etc[3]. Also, the database shows dates a business was located at a particular address so we can determine when an establishment moved to a city or if it was born there. A number of academic papers have begun to use this database.[4] The overall reliability of Dun and Bradstreet data, which underlies the NETS data, is considered high because this database has been in existence for many years[5].

The second database comes from the Kosmont-Rose Institute *Cost of Doing Business Survey*, published annually by the Rose Institute at Claremont-McKenna

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[2] Government sources from Census (*Census of Business*, *County Business Patterns*, etc) and BEA at best report many data items at the county level or Metropolitan Statistical Area (MSA) level, the latter of which tends to be an agglomeration of adjoining incorporated cities. Also, the level of detail is far less than that reported in D&B/NETS

[3] Note that government publications such as County Business Patterns frequently aggregate data at the MSA level and cannot necessarily determine the number of firs located within exact city borders.

[4] See N. Wallace, "Agglomeration Economies and the HiTech Computer Sector": http://repositories.cdlib.org/iber/fcreue/fcwp/292 and "The Role of Job Creation and Job Destruction Dynamics" in Glaeser & Quigley, *Housing Markets and the Economy* (2009). Also see Kolko and Neumark (2010) "Do Enterprise Zone Create Jobs? Evidence from California's Program" *Journal of Urban Economics.*

[5] Neumark et al. (2007) conducted a detailed analysis of the quality of the NETS data along various dimensions, and concluded that the NETS by and large provides reliable measurement of employment levels, births and deaths, business relocations, etc.

College[6]. Although this publication has been in existence since 1994 and has a wide circulation among government officials and practitioners, it apparently has not been used by academics. The Kosmont-Rose report is an annual survey of all California cities[7] that collects data on taxes imposed by the city at a fairly specific level, tax and non-tax incentives offered, and certain other data that might be useful to a business considering locating to a particular city, for example the availability of ports and airports. It is the only database of such specific tax and incentive data at the municipal level. I validated the accuracy of the 2010 *Survey* (which generally reports 2008 data) against other publicly available data, and found no significant errors or omissions.

Using the above two databases, as well as Census data on aggregate tax collections by city, we can construct a database of business and employment activity, and tax and incentive programs, city by city for California from 1998-2007[8] [9]. Since the research question is whether city business tax structures can encourage or slow economic development, we need some measures of such development. The NETS data allows us to examine employment, number of establishments, sales revenue of establishments, number of new establishments (births and establishments moving into a city), by year. In this paper, I aggregate such data for all individual establishments, by exact city. The data also allows us to measure business taxes in two ways. The first such measure is an average overall effective business tax rate, calculated as total business taxes[10] in any city *i* for year *t* (reported by Census)[11], divided by total revenues for firms in any city *i* for year *t.*[12]

The second measure is derived from the Kosmont- Rose data. Here, we form a dummy variable which indicates whether the city has a general business tax in any form based on gross receipts, payroll employment, or rental incomes. This dummy variable

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[6] See http://rosereport.org/

[7] Starting in 2010, the survey was expanded to cover another 200 cities across the U.S.

[8] Although NETS and Kosmont-Rose data are available after 2008, Census data post 2007 on tax collections was not yet available at the time of this writing

[9] Note that Kosmont-Rose data prior to 2001 was published in paper volumes and all years are not available. Similarly, national data from this source is available for only two years, and does not include all U.S. cities, limiting its generalizability.

[10] These include corporate income taxes, various business licenses and fees, severance taxes, and NEC (the latter of which, on investigation , was essentially all business taxes).

[11] Census only reports such data aggregated at the state level. Accordingly, we requested disaggregated data under Freedom of Information (FOI) Act. In addition to tax revenues by type, such data also reports detailed level of expenditures and other municipal financial data, by year. This data also reports school districts, county, and other special taxing districts for which care was taken not to include in our analysis.

[12] The D&B data does not report net income by establishment so we use revenues. It should be noted that when we instead use number of establishments instead of sales as the divisor, regression results (in terms of signs and significance) are essentially unchanged from those reported in subsequent tables.

does not indicate whether the city imposes other taxes, fees, or licenses, and as such measures only the presence or absence of a general business tax. However, the general business tax typically accounts for over half of the total business taxes imposed by California cities, and is easily the most visible tax to businesses. California cities impose such general business taxes in a variety of ways[13]; the Appendix reports such general business tax structures for a sample of cities. The Kosmont-Rose data also reports document transfer fees, which we use in regressions as well. While this measure of overall city business taxes is not comprehensive, it nonetheless corroborates findings when we use the overall effective business tax measure[14].

In examining whether city taxes have an economic impact, we of course want to control for other factors that could affect business activity. The Kosmont-Rose data collects other factors in terms of incentives offered by cities, which are discussed below. We also want to control for larger economic factors at work. We can use the general setup from Goolsbee and Maydew (2000), who examine the impact of a specific state structure on state employment, and adapt it to the municipal level, as follows:

$$ln\,(EMPL_{it}) = \alpha_i + \beta_1\, CITYTAX_{it} + \Gamma_1 \boldsymbol{I}_{it} + \Gamma_2 \boldsymbol{Z}_{it} + \varepsilon_{it} \qquad (1)$$

where: *CITYTAX* is either overall effective city business tax rate, or existence of general business tax, in city *i* in year *t*; ***I*** is a vector of city *i* incentives (and disincentives) in year *t*; and ***Z*** is a vector of other macro effects (number of establishments and employment at the county level, as well as city population) which might affect city *i* employment in year *t*. The dependent variable in (1) is employment in city *i* in year *t*, and can also be number of establishments and number of new establishments in year *t* for each city *i*.

Descriptive data is shown in Table 2. It is noteworthy that California features a wide variety of not only city sizes (population and number of establishments), but tax structures as well. Effective overall city business tax rates average .42 per cent (as a per cent of sales[15]). While most cities offer industrial development bonds, developer subsidy

[13] Under the California State Constitution, cities cannot impose income taxes, so they must use alternative business tax structures.

[14] The Kosmont Rose *Survey* also collects data on utility user tax rates, parking tax rates, and occupancy tax rates. They also have some data whether a city has any fees which would apply for development activity, which can be represented as dummy variables. However, these are so correlated that their regression coefficient estimates were collinear and inconsistent.

[15] To make this comparable to Table 1, which calculates effective rates as roughly a per cent of profits, if we assume a 10 per cent profit rate, then the .42 per cent average would be roughly 4.2 per cent of profits (the California average reported in Table 1 is slightly higher since in averages 2003-2008).

programs, and utility discounts, there is a wide variation in special tax zones. Specifically, 13.9 per cent offer Foreign Trade Zones, or FTZs. FTZs are areas where importers and exporters are given favorable export duty treatment and fee structures; benefits given to businesses are essentially borne by the Federal government. State-designated Enterprise Zones (EZs) are identified in 17.6 per cent of cities; firms locating in such zones can receive generous state income tax benefits because the cost is borne by the state. Another 56.7 per cent of cities have other special zones, mostly Federal Empowerment Zones and Renewal Communities[16], where firms can receive federal income tax benefits. And 39.5 per cent have business improvement districts (BIDS) for which cities offer a variety of permit fast tracking and other non-tax benefits. Finally, the vast majority of cities have Redevelopment Areas (RDAs), the primary method by which California offers tax increment financing (TIF), whereby developers may receive certain subsidies and cities finance new projects through increased property tax revenues.

Regression results for *ln* of employment in year *t* for cities are reported in Table 3. The left side of the Table shows results where the business tax variable is an overall effective rate, calculated as total business taxes paid in a city for that year, divided by total sales revenues reported by establishments located in that city, in the same year. Since it is possible that this effective rate is endogenously related to employment, the effective rate is recalculated as an instrumental variable (IV) and then used in the regressions. The IV is calculated by regressing the effective rate on all other establishment level data for that year[17]. Instrumental variable results for business tax rates are approximately ten per cent lower than when the non-IV versions are used, but the related coefficient signs and statistical significance are unchanged. The results show that effective city business tax rates reduce employment, and the result is significant at .001.

Consistent with expectations, Foreign Trade Zones, special zones, business improvement districts, city-sponsored tenant improved relationship studies, and the presence of special programs and services significantly increase employment. State EZs

[16] Some are state of California Recycling zones, where manufacturers using recycled products receive a sales tax break from the state. Also included are some miscellaneous, city-specific zones.

[17] So for employment regressions, I regress effective rate on number of establishments and number of new establishments. For new establishments regressions, I develop an IV by regressing effective rate on number of establishments, and employment. For regressions with establishments as the dependent variable, the IV is developed from a regression of effective tax rate on employment and number of new establishments. Note that regression results using direct (non-IV) measures of business tax rates were also statistically significantly and negatively related to employment, number of establishments, and number of new establishments (these regressions are available from the author)

and RDA areas have no effect on employment, nor do sales tax rates, estimated property tax rates, or industrial development bonds (IRBs) have any significant employment effect. The last result may be due to the fact that essentially all California cities offer IRBs. Although some sales and property taxes[18] are paid by businesses, their effects on employment are not obvious.

The left side of Table 3 reports the same regressions, except that the city business tax rate is represented as a dummy variable[19], set equal to 1 if the city has any general business tax. This dummy variable had a statistically significant negative impact on employment. The coefficient estimate is smaller than that for the overall effective business tax rate variable because it indicates only if the city has a general business tax on gross receipts, employment, or rental incomes, and does not capture the effects of other business related taxes and fees. Results for all other variables are essentially unchanged from those reported on the left side of the Table, except that sales tax rates are now negative and significant, and the presence of RDA/TIF areas in a city are now positive and significant, all of which are consistent with expectations.

Table 4 shows regression results for *ln* of new establishments in a city in year *t*. New establishments capture both births and establishments that have moved into a city in any particular year. The left side of the Table, where the overall effective business tax rate variable is used (in its IV form), has essentially the same results as in Table 3. The results show that effective city business tax rates reduce the number of new establishments, and the result is significant at .001.

Special zones, business improvement districts, city-sponsored tenant improvement studies, and the presence of special programs and services significantly increase new establishments in a city. State EZs and RDA areas have no effect, nor do property tax rates or industrial development bonds (IRBs) have any significant effect on the number of new establishments in any one year. The left side of Table 4, where the general business tax dummy is used, also shows that the presence of a general business tax is significantly associated with a decrease in number of new establishments

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[18] Property taxes for business are paid by landlords, who in theory pass some of these costs onto business renters in the form of higher lease prices/rental rates. Note that property tax rates are *estimated* by Kosmont Rose; in light of the finding in previous studies that property taxes do have an impact on economic development, we cannot rule out that the findings here are due to measurement error.

[19] Although it is possible this dummy variable is endogenously related to business activity (employment), cities did not change their overall tax structure (having a general business tax, or not having such a tax), during this time period. Hence, we do not use an IV estimate here.

in a city. Coefficient signs and statistical significance for other variables are very similar to those shown on the left side of this Table.

Finally, Table 5 shows regression results where the dependent variable is the *ln* of the total number of establishments in a city in year *t*. Regressions using both measures of the business tax show that higher levels of this tax reduce the number of establishments in a city, at a .001 level of significance. Coefficients for other variables, in terms of signs and significance, are very similar to those reported in Tables 3 and 4. A noteworthy exception is that both sales tax and estimated property tax rates are significantly and negatively related to the number of establishments, consistent with expectations.

Averaging the coefficients from Tables 3 through 5, we have an estimated average elasticity of -.235 for municipal business taxes. Specification checks are available from the author and indicate the above results are robust.

5. The Impact of Municipal Taxes in Other States

It may be the case that the results in California reported in Section 4 are not generalizable. Accordingly, the effects of business tax rates on economic growth are estimated for other states for 1998-2007. While tax collection data is reported for all U.S. cities, obtaining establishment level data by city on a wider scale is costly. Accordingly, I examine the following nine other states for which I purchased the NETS data: Georgia, Illinois, Louisiana, New York, Oregon, Utah, Vermont, West Virginia, and Wisconsin. These states represent a geographically and economically varied sample. After matching those cities for which we have both tax collection (from Census) and establishment level data, we have 514 cities. Although we do not have the Kosmont-Rose dataset to use for these cities[20], we can still construct an overall effective business tax rate variable in the same manner as for California, and we can proxy for the other variables using a fixed effects specification (dummy variables for city, state, and year). This fixed effects specification also has the advantage of picking up the effects of any other omitted geographically related variables.

Descriptive data for the cities in these other nine states are shown in Table 6. Regression results are shown in Table 7, where the dependent variables are *ln* of employment in year t, *ln* of new establishments in year *t*, and *ln* of total number of

[20] Kosmont-Rose began collecting data for a sample of 200 other U.S cities very recently, but there is no historical database of such non-California cities.

establishments in year *t*. Similar to the California city regressions, we estimate an IV version of the effective business tax rate variable from a first stage regression (see discussion of the IV estimation method in Section 4). Panel A reports regressions for all nine states pooled. The regressions are reasonably well specified, each with adjusted R^2 in excess of 70 per cent. Overall, city business tax rates significantly reduce the number of establishments (both total and new) and reduce employment as well. The average elasticity implied by the three regressions is -.276.

Panels B through K in Table 7 report individual state regressions. The results are generally similar to the pooled results. Georgia, Illinois, New York, Oregon, Utah, West Virginia, and Wisconsin show statistically significant negative coefficients for overall effective business tax rates, with the largest coefficients for Georgia. On the other hand, overall effective business tax rate coefficients are not significant for Louisiana or Vermont.

6. Effects of City Tax Reductions: The Case of Los Angeles

The author was engaged as the principal investigator (PI) by the City of Los Angeles to examine various proposals for reform of the City's general business tax. As part of this analysis, I examined two actual tax changes in the past in an attempt to estimate the responsiveness of the Los Angles business community to a particular tax. This exercise was afforded by a unique, confidential dataset provided by the City and derived from actual tax records. As such, it offers a unique opportunity to estimate the economic impact of municipal taxes in a city tax setting.

The study examined cuts in the Los Angeles business/gross receipt tax in 2001 and in 2007. The City of Los Angeles gross receipts tax historically has accounted for 10% of City revenues, which amounted to $424 million in revenue in FY2010-2011. Most for-profit industries are taxed, with rates ranging as high as $ 5.07/thousand of gross receipts (sales[21]), depending on industry. Exceptions to taxation exist for certain small businesses.

Los Angeles enacted two relatively significant tax holidays in the last decade that we can use as "natural experiments." Effective January 1, 2001, a "new business" holiday was enacted for all firms with gross receipts of less than $500,000. The holiday applied only in the first two years of operations. In July 2006 (effective January 1, 2007)

[21] Throughout this report the term "sales" is sometimes used, and "gross receipts" is also sometimes used. Both relate to the revenues which a company generates.

the small business tax exemption was doubled to $100,000 of annual gross receipts. If these tax holidays were effective, we would expect to see increases both in the number of LA firms and in related employment statistics [22].

To test the effectiveness of these law changes, two databases were used: the LATAX data from the City of Los Angeles, and the 2009 D&B/National Establishment Time-Series (NETS) Database (discussed in Section 3). The LATAX database contains firm-specific data on all taxes paid to the City from 2001 to 2010 including firm specific information[23] such as name, address, and taxable gross receipts.[24]

Significant differences distinguish the two databases. LATAX has information on firms that pay business taxes to LA, whereas NETS is a national database. NETS is based in part on voluntary participation by firms to a mailed Dun & Bradstreet survey and, accordingly, participation is smaller for very small firms with sales under $100,000. NETS also allows use of establishment level data. An advantage of data at this level is that it can capture expansion or contraction of a firm that adds or closes a location, which is not easily captured using firm-level data. As a practical matter, many small firms have only a single establishment, so this drill-down level of data becomes more meaningful for larger firm sizes. Both LATAX and NETS have exact location, name, revenue, and SIC/NAICS code data, but only NETS has employment data. The differences allow for "triangulation" in the sense that we can use both to estimate potential economic impacts of LA business tax changes. Also, LATAX data includes establishments which pay taxes to Los Angeles but are outside of the City limits. In contrast, NETS data allows precise identification of only establishments within the City of Los Angeles borders, potentially allowing a more precise impact analysis of LA tax policies on only LA-based firms. Because LATAX includes some firms outside of LA, and also requires the filing of separate returns when a firms has separate lines of business

[22] It is important to note that LA also enacted a number of other tax reforms which are more problematic to test. For example, tax reductions to certain industries (e.g., motion pictures) may or may not be generalizable to all LA firms. Also, gradual 15% reductions in tax rates starting in 2006 are relatively small and more importantly, because they occurred in succession, analyzing the effects of rates of change from one year to the next is more difficult to isolate.

[23] To preserve confidentiality the database provided by the City did not include Social Security numbers or Federal Employment Identification (FEIN) numbers.

[24] This data was provided to the author by the City of Los Angeles on a confidential basis .

(thus has separate tax rates), this dataset has more observations than does the D&B/NETS database.

To examine the impact of the 2001 and 2007 law changes, we look at the economic impact immediately before and after the law change, using both LATAX and NETS data. Specifically, I looked at aggregate differences in trends in Los Angeles firms before and after the tax change, and compared that difference in trend to the calculated difference in trends for a control group. The difference-in-difference (or DID) in trends between the Los Angeles firms, and the control group, is assumed to be the result of the tax change.

6.1 Law Change in 2001

Using the NETS database, data for firms affected by the "under $500k in sales" tax holiday policy is shown in Panel A of Table 8.To evaluate the employment growth for LA based firms subject to the new business exemption, I compared such firms' growth to control groups. To control for trends we compared changes in changes to the affected LA firms versus changes in changes to the control group. One such group would be LA firms with sales in excess of $500,000. Data for this group of larger LA-based firms is shown in Panel B of Table 8.

Prior to the exemption (from 1999-2000), LA firms with sales under $500k experienced a 6.7% employment growth. After the exemption, they experienced a 9.37% employment growth. Thus, the change, after controlling for the previous year's trend, was a 2.67% job increase. Prior to the exemption (from 1999-2000), LA firms with sales over $500k experienced a 7.97% employment growth. After the exemption, they experienced a 2.0% employment growth. Thus, the change, after controlling for the previous year's trend, was a 5.97% job decrease. Comparing the two groups of LA firms, the firms with sales under $500k experienced an 8.64% job increase (or 2.67% minus -5.97%).

If, instead of employment, we use number of establishments, we find the following. Prior to the exemption (from 1999-2000), LA firms with sales under $500k experienced a 7.48% growth in the number of establishments. After the exemption, they experienced an 8.76% growth in firms. Thus, the change, after controlling for the previous year's trend, was a 1.28% increase. Prior to the exemption (from 1999-2000), LA firms with sales over $500k experienced a 6.88% growth in the number of establishments. After the exemption, they experienced a 2.85% growth in the number of

establishments. Thus, the change, after controlling for the previous year's trend, was a 4.03% decrease. Thus, comparing the two groups of LA firms, the firms with sales under $500k experienced an 5.31% increase (or 1.28% minus -4.03%).

If we use instead other California firms, not based in LA, but based in other Metropolitan Statistical Areas (MSAs) and with sales of under $500k, we see the following results. As shown in Panel C of Table 8, these firms experienced 7.71% and 7.31% growth in employment from 1999-2000 and 2000-2001, respectively. Thus there was a .4% decline, after controlling for trend, after 2000. Comparing them to the LA-based firms with sales of under $500k, we see the latter experienced a relative growth of 3.07% after the exemption.

Averaging the above two comparisons, the new exemption was associated with a 5.86% direct job growth in firms with sales of under $500k. A major strength of examining the change in *all firms* with sales under $500,000, as opposed to examining only new firms with sales under $500,000 which started business after the tax holiday, is that we control for potential crowding out effects. That is, if the net number of firms increased, any effects of crowding out must be small. However, we can re-analyze the data examining only new firms (with sales under $500,000) starting in Los Angeles before and after the law change. Panel D shows that for new LA firms, the relative change in employment growth was 21.6% after the exemption, or 61.34%-39.73%. Panel E shows that for new non LA firms, the relative change in employment growth in 2001 was a decline of 7.85%, or 28.5%-36.35%. Comparing LA firms to non-LA firms, we see that LA-based firms' change in 2001 employment growth was thus 29.46% higher. These results show a much more dramatic effect of the 2001 tax holiday than shown in the preceding panels, but again, the reader is cautioned that these do not measure whether some crowding out of existing firms may also have occurred. It is worth noting that we cannot compare 2001 employment growth for LA firms with sales over $500,000, since according to the NETS data, there were no new establishments created by these firms in 2001.

Although LATAX data does not have employment data, we can use it to examine growth in the number of firms affected by the new policy. Panels F and G of Table 8[25] show data for firms affected by the policy, as well as data for larger LA firms. To control for trends we compare changes in changes to the affected LA firms versus changes in

[25] It is important to note that starting in 2001, the Los Angeles Office of Finance (which administers the tax) increased compliance (partly as a result of AB 63) through discovery measures. The Table only includes firms which were not part of the discovery process.

changes to the control group. Taxable gross receipts and taxes paid should be interpreted with caution, since both would be expected to decline after the exemption, which is what we observe. Prior to the exemption (from 1999-2000), the number of LA firms with sales under $500k had no growth in gross receipts. On the other hand, the number of firms in this category grew, after controlling for trend, by 3.68%. From 2000 to 2001, these smaller firms had 1.7% growth in gross receipts after controlling for trend. Clearly, they grew more than the under-$500k firms in terms of gross receipts. On the other hand, the number of firms in this category grew, after controlling for trend, by .31%. By comparison, and controlling for trend, growth in the under $500k firms was 3.35% higher.

In summary, the 2001 new business exemption appears to have created economic growth, although the two databases provide different pictures. The NETS database indicates average employment and number of establishment growths of 5.86% and 4.135%, respectively. The LATX data shows no growth in the gross receipts but positive growth in the number of firms. Elasticities are as follows. First, if we assume a 10-year investment horizon, then (ignoring the time value of money) a one-year tax exemption is equivalent to a 10% tax decrease (note that the law change allowed a two-year exemption, but because we are examining a single year only, this is equivalent to a 10% change). For employment, since employment increased 5.86%, we get a labor elasticity (with respect to each percent change in tax) of -.586. For number of establishments, if we simply average results for NETS and LATAX, growth is 2.07%, which implies an elasticity of -.207.

6.2 Law Change in 2007

Effective January 1, 2007, the small business exemption was doubled to companies having global sales under $100,000[26]. It is important to recall that 2007 was the start of the Great Recession so we would expect to see economic decline in number of firms, sales, and employment figures in general. To evaluate the employment growth for LA based firms subject to the small business exemption, we compared such firms' growth to control groups. To control for trends we compared changes in changes to the affected LA firms versus changes in changes to the control group. Panel A of Table 9 shows NETS-based data for firms affected by the new policy, i.e, those having sales below $100,000.

[26] It applies to companies having global sales of under $100k.

One control group would be other LA firms with sales in excess of $100,000. These firms are shown in Panel B of Table 9. Prior to the exemption (from 2005-2006), LA firms with sales under $100k experienced an 11.61% employment growth. After the exemption, they experienced an 8.0% employment growth. Thus, the change, after controlling for the previous year's trend, was a 3.61% job decrease. Prior to the exemption (from 2005-2006), LA firms with sales over $100k experienced a -.26% employment decline. After the exemption, they experienced a 2.07% employment growth. So the change, after controlling for the previous year's trend, was a 2.33% job increase. Thus, comparing the two groups of LA firms, the firms with sales under $100k experienced a 5.94% job decrease (or 3.61% plus 2.33%).

If we use instead, as a control group, other California firms not based in LA but based in other MSAs and with sales of under $100k, we see the following results (Panel C of Table 9). These firms experienced 9.49% and 6.72% growths in employment from 2005-2006 and 2006-2007, respectively. Thus there was a 2.77% decline, after controlling for trend, after 2006. Comparing them to the LA firms with sales of under $100k, we see the latter experienced a relative decline of .84% after the exemption. Averaging the above two comparisons, the small business exemption was not associated with any detectible job retention/creation. When we use the number of establishments, instead of employment, we find more encouraging results, with a net growth of 5.76% (comparing small firm growth to larger firm growth).

Data using LATAX data, is shown in Panels D and E of Table 9. To evaluate the sales and number of firm growth for LA based firms subject to the new business exemption, we compare such firms' growth to control groups. To control for trends we compare changes in changes to the affected LA firms versus changes in changes to the control group; here, the control group is LA firms with sales in excess of $100,000. Since we would expect taxable gross receipts and tax collections to go down for the small firms because of the recession, data for these two variables are shown for general information only. A more meaningful statistic is the number of firms. The number of firms shows no measureable growth. Prior to the exemption (from 2005-2006), the number of LA firms with sales under $100k experienced a 6.23% growth. After the exemption, there was a 1.82% sales growth. Thus, the change, after controlling for the previous year's trend, was a 4.41% decrease in the number of firms. Prior to the exemption (from 2005-2006), the number of LA firms with sales over $100k increased 7.27%. After the exemption, there was a 5.13% growth. Thus, the change, after controlling for the previous year's

trend, was a 2.14% decrease. Thus, comparing the two groups of LA firms, the number of firms with sales under $100k experienced a 2.27% decrease (or 4.41% minus 2.14%).

On an overall basis, the 2007 new business exemption appears to have had little measureable impact on job creation in the City. The Great Recession may have had a disproportionate effect on small firms. It is also important to realize that during this same time, overall City tax rates were falling, so any comparisons to other LA based firms may have been misleading. Tax rates were reduced by 3.1% in 2006, and 4% in 2007. Also, the firms affected by the 2007 exemption were very small, primarily composed of sole proprietorships which historically have a high birth and death rate, relative to other firms. Further, sole proprietors' location choice decisions are often primarily driven by proximity to where they live.

On the other hand, there is some evidence of growth in the number of firms. Averaging the LATAX and NETS result, we get a 2.88% growth rate. Estimating the elasticity associated with this is not straightforward. If we assume that any particular firm never has more than $100,000 in gross receipts, this amounts to a 100% tax cut, in which case the elasticity is -.0288. However, it is more likely that an average firm would eventually grow such that they would no longer be subject to the exemption, in which case the tax reduction is less than 100%. Accordingly, the elasticity estimate of -.0288 would certainly increase. On the other hand, recall that the 2001 changes, which affected a much broader set of firms, resulted in a direct labor elasticity (with respect to each percent change in tax) of -.586 and -.207 for number of establishments.

7. Conclusion

This is the first study to provide a large-scale examination of the impact of municipal business taxes on economic development. Nationally, this paper finds that such taxes are a relatively significant cost to business. The study also finds that tax rates had a significant impact on economic development for over 500 cities spanning ten states over a period of a decade. Finally, the study uses a unique dataset to find that municipal tax cuts generally resulted in growth in both the number of jobs and establishments in a major city. Averaging all of this paper's analyses, elasticities are in the -.25 range. When we also consider that prior research has found that economic activity is also responsive to municipal property taxes, the results suggest that cities can alter their tax structures to attract economic activity.

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Table 1: Effective Overall City Business Tax Rates, Averaged by State, 2003-2007 Average

State	Average Overall City Business Tax Rate (As Per Cent of Total City Tax Collections)	Average Overall City Business Tax Rate (As Per Cent of Business Income)	State	Average Overall City Business Tax Rate (As Per Cent of Total City Tax Collections)	Average Overall City Business Tax Rate (As Per Cent of Business Income)
Alabama	.1374	.0479	**Nevada**	.1775	.0955
Arizona	.0779	.0373	**New Hampshire**	.0170	.0076
Arkansas	.0829	.0158	**New Jersey**	.0166	.0102
California	.1260	.0434	**New Mexico**	.0725	.0246
Colorado	.0586	.0212	**Nebraska**	.1233	.0460
Connecticut	.0204	.0089	**New York**	.1350	.1113
Florida	.1190	.0875	**North Carolina**	.0373	.0154
Georgia	.0496	.0231	**North Dakota**	.0294	.0067
Hawaii	.0926	.0335	**Ohio**	.0295	.0190
Idaho	.0619	.0138	**Oklahoma**	.0636	.0141
Illinois	.0742	.0372	**Oregon**	.1677	.0748
Indiana	.0239	.0099	**Pennsylvania**	.0902	.0418
Iowa	.0326	.0110	**Rhode Island**	.0170	.0109
Kansas	.0525	.0216	**South Carolina**	.1038	.0559
Kentucky	.1261	.0434	**South Dakota**	.0237	.0050
Louisiana	.0600	.0246	**Tennessee**	.0485	.0124
Maine	.0119	.0066	**Texas**	.0419	.0124
Maryland	.1306	.0893	**Utah**	.0816	.0338
Massachusetts	.0217	.0088	**Virginia**	.1289	.0732
Michigan	.0259	.0111	**Washington**	.1337	.0543
Minnesota	.0503	.0157	**West Virginia**	.1658	.0560
Mississippi	.0588	.0167	**Wisconsin**	.0227	.0135
Missouri	.1032	.0467			
Colorado	.0586	.0212	**U.S Average**	**.08835**	**.03947**

Note: Delaware, Montana, Vermont, and Wyoming excluded because business (proprietors) income not available for all years from BEA

Table 2: Descriptive Data for California Cities, Averages for 1998-2007

Panel A: Continuous Variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Population	138,521.59	329,314.86	81	3,849,378
Sales Tax Rate (%)	7.11	0.4486	7.00	7.25
Property Tax Rate (%)	1.1424	0.3391	1.0132	5.1979
Total employment	56,219.24	114,043.96	1,012	1,387,233
Number of establishments	6,173.25	11,898.09	10.00	184,701
Number of new establishments	464.49	1,001.66	0	28,120
General Business tax rate (as per cent of sales)	.4222	.9747	.00798	2.8700
Average business tax per establishment ($)	2,811.23	18,828.03	4.8732	290,302.33
Percent of cities with some type of tax on gross receipts, wages, payroll, or rental income	0.93	.24	0	1
Documentary Transfer Tax Rate	1.7757	7.1934	0	110.00
Number of establishments in County	95,368.70	93,796.53	819	249,977
Number of employees in County	1,552,875.37	1,513,408.14	7,377	3,895,886

Panel B: Dummy Variables--Per cent of Cities with Value of 1

Indus-trial Dev. Bonds	Tenant Im-proved Relation Studies	Bus. Improve-ment District	State Enter-prise Zone	Foreign Trade Zones	Other Spec. Bus. Zone	RDA/ TIFs	Special Incentive Program Services
(.872)	(.900)	(.395)	(.176)	(.139)	(.567)	(.877)	(.791)

Table 3: Regression Results for *ln* Employment
California Cities 1998-2007

Business Tax is *Overall Effective Business Tax Rate*			Business Tax is *Dummy Variable* (set to 1 if city has business tax)	
Explanatory Variable (predicted sign)	**Parameter Estimate**		**Explanatory Variable (predicted sign)**	**Parameter Estimate**
Intercept	8.620 ** (.337)		**Intercept**	9.341*** (.362)
Overall Effective Business Tax Rate IV (-)	-.328** (.134)		**General Business Tax Dummy Variable (-)**	-.150** (.057)
Sales Tax Rate (-)	-.006 (.037)		**Sales Tax Rate (-)**	-.079* (.039)
Property Tax Rate (-)	.011 (.057)		**Property Tax Rate (-)**	-.079 (.069)
Document Transfer Tax Rate (-)	n.a.		**Document Transfer Tax Rate (-)**	-.00011 (.00217)
Industrial Development Bonds (+)	.018 (.057)		**Industrial Development Bonds (+)**	.034 (.062)
Tenant Improved Relationship Studies (+)	.462*** (.069)		**Tenant Improved Relationship Studies (+)**	.342*** (.070)
Business Improvement Districts (+)	.271*** (.0344)		**Business Improvement Districts (+)**	.352*** (.035)
State Enterprise Zones (+)	-.029 (.047)		**State Enterprise Zones (+)**	.026 (.049)
Foreign Trade Zones (+)	.099 * (.050)		**Foreign Trade Zones (+)**	.363*** (.052)
Other Special Business Zones (+)	.410*** (.034)		**Other Special Business Zones (+)**	.502*** (.037)
RDA/TIFs (+)	.082 (.062)		**RDA/TIFs (+)**	.215*** (.064)
Special Incentive Program Services (+)	.301 *** (.043)		**Special Incentive Program Services (+)**	.378*** (.046)
Population (+ or -)	.00000475*** (.00000187)		**Population (+ or -)**	.00000108*** (.000000051)
Number of Establishments in County (+)	-.00000370 (.00000328)		**Number of Establishments in County (+)**	-.00000381 (.00000355)
Employment in County (+)	.00000237 (.00000205)		**Employment in County (+)**	.000000174 (.0000000191)
Number of Observations	2916		**Number of Observations**	2916
Adjusted R^2	.5470		**Adjusted R^2**	.4855

***significant at .001 ** significant at .01 *significant at .1 Robust standard errors in parentheses. Dummy variables for years included. Document transfer tax rate already effectively included in overall effective business tax rate for regression on left side of Table.

Table 4: Regression Results for *ln* Number of New Establishments
California Cities 1998-2007

Business Tax Is *Overall Effective Business Tax Rate*			Business Tax Is *Dummy Variable* (set to 1 if city has business tax)	
Explanatory Variable (predicted sign)	**Parameter Estimate**		**Explanatory Variable (predicted sign)**	**Parameter Estimate**
Intercept	5.549*** (.388)		**Intercept**	6.603*** (.397)
Overall Effective Business Tax Rate IV (-)	-.132*** (.010)		**General Business Tax Dummy Variable (-)**	-.374*** (.065)
Sales Tax Rate (-)	-.197*** (.042)		**Sales Tax Rate (-)**	-.283*** (.043)
Property Tax Rate (-)	.054 (.066)		**Property Tax Rate (-)**	-.089 (.077)
Document Transfer Tax Rate (-)	n.a.		**Document Transfer Tax Rate (-)**	-.001 (.002)
Industrial Development Bonds (+)	.008 (.066)		**Industrial Development Bonds (+)**	.063 (.068)
Tenant Improved Relationship Studies (+)	.355*** (.080)		**Tenant Improved Relationship Studies (+)**	.255*** (.077)
Business Improvement Districts (+)	.292*** (.039)		**Business Improvement Districts (+)**	.381*** (.039)
State Enterprise Zones (+)	-.030 (.054)		**State Enterprise Zones (+)**	.045 (.053)
Foreign Trade Zones (+)	.011 (.058)		**Foreign Trade Zones (+)**	.284*** (.057)
Other Special Business Zones (+)	.297*** (.039)		**Other Special Business Zones (+)**	.418*** (.041)
RDA/TIFs (+)	.023 (.071)		**RDA/TIFs (+)**	.187** (.071)
Special Incentive Program Services (+)	.223*** (.049)		**Special Incentive Program Services (+)**	.395*** (.051)
Population (+ or -)	.00000494*** (.000000021)		**Population (+ or -)**	.00000109*** (.00000064)
Number of Establishments in County (+)	-.00000370 (.00000328)		**Number of Establishments in County (+)**	-.00000635 (.00000342)
Employment in County (+)	.000002379 (.00000205)		**Employment in County (+)**	.000000365 (.000000215)
Number of Observations	2916		**Number of Observations**	2916
Adjusted R^2	.4594		**Adjusted R^2**	.4191

***significant at .001 ** significant at .01 *significant at .1 Robust standard errors in parentheses. Dummy variables for years included. Document transfer tax rate already effectively included in overall effective business tax rate for regression on left side of Table.

Table 5: Regression Results for *ln* Total Number of Establishments California Cities 1998-2007

Business Tax Is *Overall Effective Business Tax Rate*			Business Tax Is *Dummy Variable* (set to 1 if city has business tax)	
Explanatory Variable (predicted sign)	**Parameter Estimate**		**Explanatory Variable (predicted sign)**	**Parameter Estimate**
Intercept	7.919*** (.312)		**Intercept**	8.679*** (.352)
Overall Effective Business Tax Rate IV (-)	-.213*** (.032)		**General Business Tax Dummy Variable (-)**	-.213*** (.073)
Sales Tax Rate (-)	-.145*** (.034)		**Sales Tax Rate (-)**	-.223*** (.038)
Property Tax Rate (-)	-.018 (.052)		**Property Tax Rate (-)**	-.119** (.048)
Document Transfer Tax Rate (-)	n.a.		**Document Transfer Tax Rate (-)**	.000023 (.00212)
Industrial Development Bonds (+)	-.012 (.053)		**Industrial Development Bonds (+)**	.006 (.060)
Tenant Improved Relationship Studies (+)	.398*** (.064)		**Tenant Improved Relationship Studies (+)**	.320*** (.069)
Business Improvement Districts (+)	.353*** (.031)		**Business Improvement Districts (+)**	.444*** (.034)
State Enterprise Zones (+)	-.023 (.044)		**State Enterprise Zones (+)**	.076*** (.047)
Foreign Trade Zones (+)	.071 (.047)		**Foreign Trade Zones (+)**	.303*** (.051)
Other Special Business Zones (+)	.289*** (.032)		**Other Special Business Zones (+)**	.406*** (.036)
RDA/TIFs (+)	-.012 (.057)		**RDA/TIFs (+)**	.174*** (.063)
Special Incentive Program Services (+)	.291*** (.039)		**Special Incentive Program Services (+)**	.374*** (.045)
Population (+ or -)	.00000441*** (.00000174)		**Population (+ or -)**	.00000101*** (.000000573)
Number of Establishments in County (+)	.00000214 (.00000265)		**Number of Establishments in County (+)**	-.00000352 (.00000304)
Employment in County (+)	-.000000145 (.000000165)		**Employment in County (+)**	.000000174 (.0000000191)
Number of Observations	2916		**Number of Observations**	2916
Adjusted R^2	.5473		**Adjusted R^2**	.4839

***significant at .001 ** significant at .01 *significant at .1 Robust standard errors in parentheses. Dummy variables for years included. Document transfer tax rate already effectively included in overall effective business tax rate for regression on left side of Table.

Table 6: Descriptive Data for Cities in Georgia, Illinois, Louisiana, New York, Oregon, Utah, Vermont, West Virginia, and Wisconsin (Averages for 1998-2007)

Variable	Mean	Standard Deviation	Minimum	Maximum
Total employment in city	16,939.86	105,856.35	0	2,534,591
Number of establishments in city	1,406.35	7,481.68	0	213,917
Number of new establishments in city	78.38	708.94	0	57,121
Overall Effective Business Tax Rate (as per cent of sales) for city	.456	.920	0	1.998

Table 7: Regression Results for Cities in Georgia, Illinois, Louisiana, New York, Oregon, Utah, Vermont, West Virginia, and Wisconsin
1998-2007

Panel A: All States Combined

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	8.000*** (.788)	2.463*** (.715)	5.976*** (.642)
Overall Effective Business Tax Rate IV (-)	-.305** (.021)	-.258*** (.019)	-.267*** (.017)
Year Dummy Variable	yes	yes	yes
City Dummy Variable	yes	yes	yes
State Dummy Variable	yes	yes	yes
Number of Observations	5,177	5,177	5,177
Adjusted R^2	.768	.720	.769

Panel B: Georgia

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	11.025*** (.568)	4.774*** (.498)	8.579*** (.481)
Overall Effective Business Tax Rate IV (-)	-.552*** (.122)	-.442*** (.109)	-.313*** (.105)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	195	195	195
Adjusted R^2	.622	.649	.601

Panel C: Illinois

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	9.048*** (.343)	3.693*** (.300)	6.287*** (.271)
Overall Effective Business Tax Rate IV (-)	-.192*** (.037)	-.125*** (.033)	-.163*** (.029)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	2635	2635	2635
Adjusted R^2	.794	.760	.784

***significant at .001 ** significant at .01 *significant at .1 Robust standard errors in parentheses. Number of observations are city-years without missing values.

Table 7 (continued)

Panel D: Louisiana

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	9.200*** (1.116)	3.792*** (.924)	7.321*** (.959)
Overall Effective Business Tax Rate IV (-)	-.114 (.124)	-.102 (.104)	-.053 (.107)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	118	118	118
Adjusted R^2	.431	.546	.484

Panel E: New York

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	8.665*** (.487)	2.881*** (.414)	6.766*** (.407)
Overall Effective Business Tax Rate IV (-)	-.294*** (.081)	-.352*** (.067)	-.257*** (.068)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	481	481	481
Adjusted R^2	.493	.560	.506

Panel F: Oregon

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	7.880*** (.526)	2.422*** (.457)	6.122*** (.456)
Overall Effective Business Tax Rate IV (-)	-.481** (.204)	-.572*** (.178)	-.562*** (.177)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	99	99	99
Adjusted R^2	.479	.548	.505

Panel G: Utah

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	5.002*** (.418)	.495*** (.413)	3.456*** (.354)
Overall Effective Business Tax Rate IV (-)	-.276*** (.058)	-.245*** (.058)	-.228*** (.049)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	416	416	416
Adjusted R^2	.868	.849	.875

***significant at .001 ** significant at .01 *significant at .1 Robust standard errors in parentheses. Number of observations are city-years without missing values.

Table 7 (continued)

Panel H: Vermont

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	5.675*** (.595)	.328 (.477)	3.637*** (.479)
Overall Effective Business Tax Rate IV (-)	-.046 (.075)	-.039 (.060)	-.048 (.060)
Year and City Dummy Variables	Yes	yes	yes
Number of Observations	456	456	456
Adjusted R^2	.687	.688	.680

Panel I: West Virginia

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	6.476*** (.456)	.931** (.434)	4.733*** (.390)
Overall Effective Business Tax Rate IV (-)	-.247*** (.096)	-.179* (.090)	-.145*** (.081)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	349	349	349
Adjusted R^2	.707	.693	.704

Panel K: Wisconsin

Explanatory Variable (predicted sign)	Dependent variable is *ln* Employment	Dependent variable is *ln* Number of New Establishments	Dependent variable is *ln* Total Number of Establishments
Intercept	7.331*** (.773)	1.872*** (.684)	5.586*** (.651)
Overall Effective Business Tax Rate IV (-)	-.391*** (.056)	-.349*** (.050)	-.317*** (.047)
Year and City Dummy Variables	yes	yes	yes
Number of Observations	428	428	428
Adjusted R^2	.578	.636	.548

***significant at .001 ** significant at .01 *significant at .1 Robust standard errors in parentheses. Number of observations are city-years without missing values.

Table 8: Effects of 2001 Los Angeles Business Tax Changes

Panel A: D&B Data[27]: Los Angeles Companies With Sales < $500,000

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	243,882		86,560	
2000	260,220	6.70%	93,037	7.48%
2001	284,605	9.37%	101,187	8.76%
2002	341,025	19.82%	123,387	21.94%

Panel B: D&B Data: Los Angeles Companies With Sales > $500,000

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	1,066,773		36,667	
2000	1,151,759	7.97%	39,191	6.88%
2001	1,174,548	2.00%	40,308	2.85%
2002	1,189,401	1.26%	40,783	1.18%

Panel C: D&B Data: All Other California Companies (in MSAs) With Sales > $500,000

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
1999	5,639,995		191,606	
2000	6,117,615	8.47%	206,645	7.85%
2001	6,336,846	3.58%	211,614	2.41%
2002	6,434,782	1.55%	215,287	1.74%

Panel D: D&B Data: NEW Los Angeles Companies With Sales < $500,000

Year	Total Employment of New Firms in First Year of Operations	% Change Over Prior Year
1999	71,566	
2000	99,999	39.73%
2001	161,341	61.34%

Panel E: D&B Data: All Other *NEW* California Companies (in MSAs) With Sales < $500,000

Year	Total Employment of New Firms in First Year of Operations	% Change Over Prior Year
1999	421,387	
2000	574,562	36.35%
2001	738,294	28.50%

Panel F: LATAX Data: Companies With Taxable Gross Receipts < $500,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid	% Change Over Prior Year	Number of Companies Filing	% Change Over Prior Year
1999	$14,645,651,945		$52,762,075		186,460	
2000	$14,920,217,971	1.88%	$56,183,325	6.48%	186,423	-.01%
2001	$15,120,390,211	1.34%	$51,096,932	-9.51%	193,262	3.67%
2002	$15,880,253,292	5.00%	$50,970,753	-.21%	209,155	8.29%

Panel G: LATAX Data: Companies With Taxable Gross Receipts > $500,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid	% Change Over Prior Year	Number of Companies Filing	% Change Over Prior Year
1999	$91,604,856,248		$221,484,245		28,010	
2000	$97,214,141,384	6.55%	$238,987,899	8.15%	29,124	4.00%
2001	$105,432,421,924	8.25%	$260,039,868	8.79%	30,378	4.31%
2002	$110,697,912,667	5.71%	$264,369,986	1.54%	31,516	3.75%

[27] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data. These firms may have had some reported sales outside of Los Angeles. In that case, their Los Angeles sales are clearly under $500k, qualifying them for the exemption.

Table 9: Effects of 2007 Los Angeles Business Tax Changes:

Panel A: D&B Data[28]: Los Angeles Companies With Sales Under $100,000

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	87,667		63,726	
2006	97,847	11.61%	72,063	13.08%
2007	105,654	8.00%	76,386	6.00%
2008	120,034	13.61%	88,125	15.37%
2009	134,543	12.09%	98,624	11.91%

Panel B: D&B Data: Los Angeles Companies With Sales Over $100,000

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	1,404,225		135,299	
2006	1,400,613	-.26%	139,812	3.34%
2007	1,429,657	2.07%	144,159	3.11%
2008	1,414,663	-1.05%	154,335	7.06%
2009	1,430,485	1.12%	169,501	9.83%

Panel C: D&B Data: All Other California Companies (in MSAs) With Sales Under $100,000

Year	Total Employment	% Change Over Prior Year	Number of Establishments	% Change Over Prior Year
2005	432,775		323,122	
2006	473,863	9.49%	356,916	10.46%
2007	505,727	6.72%	372,742	4.43%
2008	561,236	10.98%	418,229	12.20%
2009	632,072	12.62%	475,594	13.72%

Panel D: LATAX Data: Companies With Gross Receipts Under $100,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid[29]	% Change Over Prior Year	Number of Companies Filing	% Change Over Prior Year
2005	$6,434,533,390		$26,765,944		311,255	
2006	$6,680,098,710	3.82%	$25,486,724	-4.78%	330,671	6.23%
2007	$6,979,040,365	4.48%	$16,023,454	-37.13%	336,688	1.82%
2008	$6,959,625,453	-.28%	$11,130,533	-30.54%	326,750	-2.95%
2009	$6,990,375,702	.44%	$9,744,993	-12.45%	317,099	-2.95%

Panel E: LATAX Data: Companies With Gross Receipts Over $100,000

Year	Gross Receipts	% Change Over Prior Year	Tax Paid[30]	% Change Over Prior Year	Number of Companies Filing[31]	% Change Over Prior Year
2005	$162,569,631,851		$372,618,303		121,643	
2006	$175,727,718,188	8.09%	$395,518,584	6.15%	130,481	7.27%
2007	$194,430,753,689	10.64%	$411,071,954	3.93%	137,181	5.13%
2008	$206,561,747,814	6.24%	$417,585,328	1.58%	141,181	2.92%
2009	$212,417,857,838	2.84%	$396,325,299	5.09%	143,529	1.66%

[28] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data. These firms may have had some reported sales outside of Los Angeles. In that case, their Los Angeles sales are clearly under $500k, qualifying them for the exemption.

[29] Tax paid does not include interest and penalties.

[30] Tax paid does not include interest and penalties.

[31] Note that a number of observations were lost because of restricting the sample to only those companies which reported sales data.

Appendix
Business Tax Rates for Select California Cities (2007 Rate per $1000 of Gross Receipts)[32]

CITY	HIGHEST RATE	MEDIAN RATE	LOWEST RATE
Alhambra	.19	.19	.19
Arcadia	Employee based	Employee based	Employee based
Azusa	.96	.16	.16
Baldwin Park	Employee based	Employee based	Employee based
Bell	.44	.44	.44
Bell Gardens	Employee based	Employee based	Employee based
Bellflower	Employee based	Employee based	Employee based
Beverly Hills	Mixture of gross receipts and Employee based; for certain industries subject to gross receipts taxes, highest rate is $23.89 (commercial property rental only)	Mixture of gross receipts and Employee based; for certain industries subject to gross receipts taxes, median rate is $1.27	Mixture of gross receipts and Employee based; for certain industries subject to gross receipts taxes, lowest rate is $1.27
Burbank	Employee based	Employee based	Employee based
Calabasas	0	0	0
Claremont	1.10	.31	.04
Compton	1.07	.29	.29
Culver City	3.01	1.01	1.01
Diamond Bar	0	0	0
El Monte	1.47	.21	.21
Gardena	1.01	.55	.51
Glendale	0	0	0
Hawthorne	1.00	1.00	1.00
Huntington Park	.4	.4	.4
Inglewood	1.65	1.10	1.10
Irwindale	.33	.33	.33
La Puente	Employee based	Employee based	Employee based
La Verne	.21	.21	0
Lawndale	Employee based	Employee based	Employee based
Lomita	.85	.85	.85
Long Beach	Employee based	Employee based	Employee based
Los Angeles	5.07	2.55/1.27	1.01
Manhattan Beach	1.79	1.79	1.79
Monterey Park	Employee based	Employee based	Employee based
Palmdale	.56	.13	.06
Pasadena	Either no tax or employee based tax, depending on industry	Either no tax or employee based tax, depending on industry	Either no tax or employee based tax, depending on industry
Pico Rivera	.31	.31	.31
Pomona	1.16	.96	.08
San Fernando	1.47	.21	.21
San Gabriel	Employee based	Employee based	Employee based
Santa Monica	5.03	1.28	1.28
Temple City	Employee based	Employee based	Employee based
Torrance	Employee based	Employee based	Employee based
West Hollywood	.01	0	0

[32] The data is all from the *2009 Kosmont-Rose Institute of Doing Business*. The top rates for Los Angeles are the most recent and may not be strictly comparable to other cities' rates which are reported by *Kosmont* for prior years. Note: medians are the middle of the categories of taxation, listed in the *Kosmont* publication