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### Title

Economic Impact of the California Healthcare, Research and Prevention Tobacco Tax Act of 2016: Job creation and economic activity

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# ECONOMIC IMPACT OF THE CALIFORNIA HEALTHCARE, RESEARCH AND PREVENTION TOBACCO TAX ACT OF 2016

Job creation and economic activity

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## EXECUTIVE SUMMARY

- The California Healthcare, Research and Prevention Tobacco Tax Act of 2016) is an initiative on the November 2016 California ballot as Proposition 56 that, if passed by the voters, will increase the tax on cigarettes by \$2.00 per pack (with corresponding increases for other tobacco products, including e-cigarettes) and allocate the money to increasing funding for MediCal (Medicaid in California), reinvigorating the California Tobacco Control Program, biomedical research, existing dental hygiene programs for children, law enforcement to ensure that the taxes are collected, medical education, and administration.
- There will be an increase in jobs and economic activity as funds are shifted from purchasing cigarettes into medical services, tobacco control, research and related activities specified by the initiative..
- The effect of the price increase associated the \$2 tax alone will reduce tobacco consumption by 69 million packs, resulting in \$244 million lost sales to the tobacco industry in the first year after the tax passes.
- Of this total reduction in pre-tax tobacco sales, \$48 million will represent retail activity in California that is shifted to the general California economy and \$195 million will represent money remains in the state economy rather than being exported to out-of-state tobacco manufacturers, notably Philip Morris and RJ Reynolds, as well as their suppliers, including tobacco farmers.
- Combining these two effects of the \$2 tax yields an estimate that there will be a net increase of about 8,645 jobs and about \$664 million in total economic activity.
- The total effect of enacting Proposition 56 will be larger, because this analysis does not include the increased effectiveness of the California Tobacco Control Program that will come with the substantially increase in funding that Proposition 56 provides.

The California Healthcare, Research and Prevention Tobacco Tax Act of 2016 (Proposition 56) is an initiative on the November 2016 California ballot as Proposition 56 that, if passed by the voters, will increase the tax on cigarettes by \$2.00 per pack (with corresponding increases for other tobacco products) and allocate the money to increasing funding for Medi-Cal (Medicaid in California), reinvigorating the California Tobacco Control Program, biomedical research, existing dental hygiene programs for children, law enforcement to ensure that the taxes are collected, medical education, and administration. It will also “backfill” lost revenues to the state’s existing programs funded by tobacco taxes (tobacco control, early childhood education and breast cancer research).

This analysis uses the Department of Commerce’s Regional Input-Output Modeling System\* (RIMS II) multipliers to estimate the effects of enacting the tax on total employment and total economic activity in California resulting from the activities funded by the tax. This analysis is based on the RIMS II California Benchmark Series (2002/2008). These multipliers estimate the total number of jobs created for each million dollars of spending, both direct and indirect, as well as the total amount of economic activity created by the direct and indirect effects of the spending mandated by the Act.

The anticipated levels of spending associated with the Act were obtained from the California Legislative Analyst’s evaluation of the Act.†

Table 1 shows the results of this analysis. There will be increases in total employment and economic activity because the activities funded by the Act have higher jobs and economic activity than the activity associated with selling cigarettes in California.

**Conclusion from Table 1:** Reallocation of resources due to changes in expenditures directly related to tax revenues will increase employment in California by 6,167 jobs and create \$231 million additional state GDP.

In addition to the direct effects of the Act on employment and economic activity due to shifting existing economic activity within the California economy, the Act will have an important effect on the total magnitude of economic activities in California because it will reduce cigarette and other tobacco consumption and most of the money spent on tobacco products is exported from California to tobacco product manufacturers and farmers (80.4%‡) outside California. The fact that this money will, for the most part, remain inside California is an important additional economic impact of the Act.\*

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\* <https://www.bea.gov/regional/rims/rimsii/>

† California Legislative Analyst’s Office. Analysis of proposed statutory initiative (A.G. File No. 15-0081, Amendment #1) that would increase the state's cigarette excise tax from 87 cents to \$2.87 per pack and apply the tobacco products excise tax to electronic cigarettes. Nov 30, 2015. <http://www.lao.ca.gov/ballot/2015/150544.pdf> (Accessed October 5, 2016)

‡ Capehart T. The Changing Tobacco User's Dollar. US Department of Agriculture. TBS-257-01 October 2004. Available at

<b>Table 1. Net Estimated Economic Activity Directly Associated with the California Healthcare, Research and Prevention Tobacco Tax Act of 2016</b>						
	Funding (millions)	Jobs Multiplier (per \$million)	Total Jobs	Economic Activity Multiplier	Total Economic Activity (millions)	RIMS II Code
<b>Increased by CHRPTA</b>						
Tobacco Control Program	\$120	18.3254	2199	2.2410	\$291	813B00 & 541800 <sup>1</sup>
UC TRDRP (Research)	\$50	13.9102	696	2.3613	\$118	541700
Law Enforcement Fund <sup>4</sup>	\$42	33.9322	1425	2.2858	\$96	561600
Administrative Accounts <sup>5</sup>	\$60	13.3354	805	2.2958	\$139	550000
UC (Medical education)	\$40	21.8484	874	2.3929	\$96	611A00
Dept. of Education	\$20	26.0943	522	2.3478	\$47	611100
Dept. of Public Health and Medi-Cal (medical care)	\$896	18.7506	16801	2.3437	\$2100	621A00, 621B00, 621600, 622000, 623000, 485A00 & 611B00
Total new CHRPTA activity	\$1,228	18.9853	23322	2.3496	\$2,887	
<b>Backfill of Propositions 99 and 10 and Breast Cancer Research Fund<sup>2</sup></b>	\$215					
Total	\$1,443		23,322		\$2,887	
<b>Reduced in other areas</b>	(\$1,228)	13.9653	(17,155)	2.1618	(\$2,656)	<sup>3</sup>
<b>NET CHANGE</b>			6,167		\$231	
<sup>1</sup> Assumes 70% spent on Civic, social and professional organizations and 30% on Advertising and related services (jobs multipliers 19.7144 and 15.0836 and total economic activity multipliers 2.5098 and 2.2241, respectively). <sup>2</sup> Because the backfill funds simply change the funding source for current economic activities, they will not change existing economic activity. <sup>3</sup> Unweighted average of multipliers for all economic sectors <sup>4</sup> Dept. of Justice, District Attorney's Office, and Board of Equalization Enforcement <sup>5</sup> Board of Equalization Administration and Dept of State Audits Source for funding data: California Legislative Analyst's Office Report.						

<http://www.ers.usda.gov/publications/tbs/OCT04/tbs25701/tbs25701.pdf> (Accessed January 5, 2012)

\* Warner KE, Fulton GA, The Economic Implications of Tobacco Product Sales in a Nontobacco State, *JAMA* 1994; 271: 771-776 and Warner K, et al, Employment Implications of Declining Tobacco Product Sales for the Regional Economies of the United States, *JAMA* 1996; 275:1241—1246.

The effect of the proposed tax on cigarette sales and tax revenue was estimated using a simple demand model based on the analysis of the California Legislative Analyst's Office. California per capita cigarette consumption, assuming no new tax is imposed, was estimated by projecting the most recent stable trend (2000 to 2014) in consumption to 2017. The annual percent change in cigarette consumption over 2001 to 2014 was -4.2% per year, which produced an estimated per capita consumption of 19.9 packs in 2017. The estimated per capita pack consumption was multiplied the Census Bureau's projected total resident population in 2017 (39,599,764) to estimate the total packs that will be sold in 2017, 790 million packs.

The effect of the \$2 tax increase in Proposition 56 was modelled by finding the price arc elasticity of demand for cigarettes that produced the midpoint of the high and low estimates of the new revenue raised by the proposed tobacco tax increase.\* The price arc elasticity of demand consistent with the Legislative Analyst's Office estimates of new revenue attributable to the proposed tax is -0.29. Applying this arc elasticity to California cigarette sales without the tax produced estimated sales of 721 million packs in 2017 with the tax, a reduction of 69 million packs due to the tax.

The total effect of the tax on sales and tax revenues was decomposed into several flows. First is the lost revenue to the tobacco industry, which was calculated assuming that 100% of cigarette taxes are passed through to the consumer, leaving the average 2015 before-tax price of cigarettes, \$3.54, unchanged. The value of lost sales to the tobacco industry due to the tax alone was calculated by multiplying the before-tax price of \$3.54 by the change in cigarette consumption due to the tax, yielding \$244 million in lost revenues to the industry in the first year.

There would be additional reductions in cigarette smoking due to the substantial increase in funding for the California Tobacco Control Program, which are not included in this analysis.

Of this total reduction in pre-tax tobacco sales, \$48 million will represent retail activity in California that is shifted to the general California economy and \$195 million will represent money that is no longer sent out of California to tobacco manufacturers and farmers.

Table 2 shows the effects of these changes. There will be some loss in jobs as a result of lower retail activity, although there will be a small increase in total economic activity due to the money previously spent on tobacco products that remained in California shifting activities with higher economic multipliers. The major change, however, will be the fact that \$195 million that previously left the California economy will remain in California.

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\* Cigarette price and consumption data are from the Tax Burden on Tobacco, and retrieved from the CDC Chronic Disease and Health Promotion Data & Indicators database (<https://chronicdata.cdc.gov/Policy/The-Tax-Burden-on-Tobacco-Volume-49-1970-2014/7nwe-3aj9/data>)

<b>Table 2. Net Effect of Reduced Tobacco Consumption, Direct effect of changing pre-tax tobacco expenditures inside and outside California</b>					
	Dollars (millions)	Jobs Multiplier (per \$million)	Total Jobs	Economic Activity Multiplier	Total Economic Activity (millions)
Reduction in dollars spent on tobacco (pre-tax)	\$243				
Of this, amount currently remaining in California	\$48	-5.2449 <sup>1</sup>	(250)	0.2296†	\$11
Balance which currently is leaving California that will represent new spending in California	\$195	13.9653 <sup>2</sup>	2,728	2.1618‡	\$422
<b>Net change</b>			2,478		\$433
<sup>1</sup> Difference in jobs/\$million between retail trade (RIIMS code 4A0000 excluding agriculture, mining and manufacturing, because these activities related to tobacco products occur outside California), 19.2012, and unweighted average jobs multiplier for all California industries, 13.9653 and corresponding economic output multipliers, 1.9322 and 2.1618. <sup>2</sup> Unweighted average jobs and economic multipliers for all industries in California. Source for industry revenue loss: author's simulation of cigarette sales revenue based on CA LAO's office report					

**Conclusion from Table 2:** Most consumer expenditure devoted cigarette sales (at the before tax price) leaves California, because very few tobacco products are manufactured in California, rather they are imported and only distributed here. With an increase in the cigarette tax, more of consumer expenditures that would have gone to purchasing cigarettes will instead remain in California. This effect will increase employment in CA by 2,478 jobs and create \$433 million in additional state GDP.

**Overall conclusion:** Combining these two different effects of enacting the Act yields an estimate that enacting the Act will lead to a net increase of about 8.645 jobs (6,617+2,478) and about \$664 million (\$231 million + \$433 million) in total economic activity, mostly because of its effects on reducing smoking and other tobacco use. As noted above, these effects will likely be larger because this analysis does not include the increased effectiveness of the California Tobacco Control Program that will come with the substantially increase in funding that Proposition 56 provides.

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