

Economic Impact of a Ban on the Sale of Menthol Cigarettes in New York City

Prepared for the New York Association of Convenience Stores



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Executive Summary

New York City has one of the most challenging retail environments for cigarette sales in the country. The total tax per pack (including MSA payments) is equal to about 72.1 percent of the current average estimated retail price of \$13.16. These are the highest cigarette taxes in the nation, and the taxable sales per adult are about 86.2 percent lower than the nationwide average.¹

Now, the New York City Council is considering a proposal to ban the sale of menthol cigarettes in the City. Were the City to ban the sale of menthol cigarettes, not only would local retailers, distributors and their employees be hurt, it would further exacerbate the problem of illicit cigarettes and cross border sales, costing the City of New York upwards of \$13.9 million annually in cigarette excise and sales tax revenues.

In addition to this, based on our model of tobacco demand, and the 2019 impact analysis of the menthol segment, about 1,230 of the roughly 5,280 people in the city whose livelihoods depend on the production, distribution and sale of menthol cigarettes would see their jobs disappear, along with \$88.4 million in local wages. The economic loss to the City would be nearly \$269.9 million. (Table 3)

Once the tax losses from the reduced economic activity are accounted for, New York City would experience a reduction of nearly \$106.6 million in tax and fee revenues as a result of this proposed ban.

¹ Based on resident population aged 21 and above.

Results

The New York City Council is currently considering Introduction 1345-2019, which if enacted would ban the sale of menthol flavored cigarettes city-wide. As of this date, the bill is in the Committee on Health and its status is listed as Laid Over in Committee.

Table 1
Cigarette Taxes and Fees in New York City

Levy	Amount Per Pack
Federal Excise Tax	\$1.01
NYS Excise Tax	\$4.35
NYC Excise Tax	\$1.50
Total Tax	\$6.86
Master Settlement Agreement	\$2.63
Total	\$9.49

New York City already has one of the most challenging retail environments for cigarettes and other tobacco products in the country. The per pack tax on cigarettes is already \$9.49 (including MSA payments) which is about 72.1 percent of the current average estimated retail price of \$13.16.² (Table 1) These are the highest cigarette taxes in the nation, and the taxable sales per adult are about 86.2 percent lower than the nationwide average.³

Table 2
Sales and Excise Tax Impact of A Menthol Cigarette Ban in New York City

	Before	After	Change
NYC Excise	\$66,227,400	\$51,331,268	(\$14,896,132)
Less NYS Share	(\$30,795,741)	(\$23,869,040)	\$6,926,701
NYC Sales	\$26,148,925	\$20,267,405	(\$5,881,521)
Total Cigarette Tax	\$61,580,584	\$47,729,633	(\$13,850,951)

Were the City to ban the sale of menthol cigarettes, not only would licensed tobacco retailers and distributors be hurt, it would further exacerbate the major problem of illicit cigarettes and cross border sales. In addition, the City of New York would lose upwards of \$13.9 million in cigarette excise and sales tax revenues. Table 2 shows the estimated tax revenue change for New York City were the ban to go into effect.

The economic impact would be far larger. Today, roughly 5,280 people in New York City rely on the production, distribution and sale of menthol cigarettes for their livelihood.⁴ Were the ban to go into effect, about 1,230 of these people (or 23.4 percent) would see their jobs disappear, along with \$88.4 million in local wages. The economic loss to the City would be nearly \$269.9 million. (See Table 3 on the following page.)

² The minimum sale price for a pack of cigarettes in New York City is \$13.00 as per Local Law 2017/145. See: *NYC Rules: Cigarette*, at: <https://rules.cityofnewyork.us/tags/cigarette>

³ Nationwide sales based on *The Tax Burden on Tobacco* Volume 53, Orzechowski and Walker, 2018. Adult population (21+) from the US Department of Commerce, Bureau of the Census, American Fact Finder.

	Packs	Adult Population (21+)	Packs Per Adult
United States	11,607,200,000	234,116,784	49.58
New York City	44,151,600	6,462,320	6.83

⁴ Based on data from *The Menthol Industry Economic Impact Study*, Prepared for Reynolds American, Inc., by John Dunham & Associates, May 1, 2019

Table 3
Economic Impact of A Menthol Cigarette Ban in New York City

	Jobs	Wages	Economic Output
Direct	(371)	\$ (21,257,275)	\$ (49,874,256)
Manufacturing	-	\$ -	\$ -
Wholesaling	(105)	\$ (10,331,220)	\$ (27,294,128)
Retailing	(266)	\$ (10,926,055)	\$ (22,580,128)
Supplier	(277)	\$ (27,369,386)	\$ (105,710,016)
Induced	(588)	\$ (39,736,931)	\$ (114,270,946)
Total	(1,236)	\$ (88,363,592)	\$ (269,855,218)

These lost jobs and wages will also lead to tax revenue reductions. When stores close, or people lose their jobs, the result is reduced tax revenues that New York City collects from property, income, fees, and other sources. It is estimated that the economic losses in the City will equate to \$92.7 million in lost revenue, of which 98.3 percent will come from reduced business taxes and fees. Table 4 outlines these losses by revenue type.

Table 4
Business and Personal Tax Revenues Lost Due to A Menthol Cigarette Ban in New York City

	Personal	Business	Total
Property Taxes	\$ 94,504	\$ 43,840,691	\$ 43,935,195
Income Taxes	\$ 1,247,708	\$ 3,820,002	\$ 5,067,710
Sales Taxes	\$ -	\$ 36,260,735	\$ 36,260,735
Other Taxes	\$ -	\$ 6,879,473	\$ 6,879,473
Fines/Fees/Licenses	\$ 254,011	\$ 344,449	\$ 598,460
Total	\$ 1,596,223	\$ 91,145,349	\$ 92,741,572

Overall, a ban on the sale of menthol cigarettes in New York, will result in a reduction of nearly \$106.6 million in tax and fee revenues. (Table 5)

Table 5
Total Revenues Lost Due to A Menthol Cigarette Ban in New York City

Revenue Type	Revenue Loss
NYC Excise	\$ (7,969,430)
NYC Cigarette Sales	\$ (5,881,521)
Personal Taxes	\$ (1,596,223)
Business Taxes	\$ (91,145,349)
Total	\$ (106,592,523)

Methodology

This analysis is based on the Menthol Industry Economic Impact Study for 2019. This model incorporates a geographic distribution model that allocates all menthol cigarette production, distribution and retailing jobs across the country based on either individual facility geographic coordinates, or facility zip code.⁵

Overall, a total of 9,993 jobs in New York State depend on the sale of menthol cigarettes. Of these, 5,280, or 52.8 percent are located in New York City.

This economic impact analysis was developed by JDA based on data provided by Reynolds American Inc. (RAI), Infogroup, The Tax Burden on Tobacco 2018, the Food and Drug Administration, Centers for Disease Control and Prevention (CDC), and Federal and state governments. The analysis utilizes the IMPLAN model in order to quantify the economic impact of the menthol cigarette industry on the economy of the United States, as well as individual states, congressional districts, and state legislative districts.⁶ The model adopts an accounting framework through which the relationships between different inputs and outputs across industries and sectors are computed. It is based on the national income accounts generated by the US Department of Commerce, Bureau of Economic Analysis (BEA).⁷

The menthol share of sales in New York is 38.8 percent of total cigarette sales, based on data provided by RAI. New York City's share of menthol sales is not available but is assumed to be the same as the state share.

Every economic impact analysis begins with a description of the industry being examined. In the case of the menthol industry it is defined as the three components of the United States' menthol cigarette industry. This will incorporate firms in the following economic sectors:

- ❖ Manufacturers: Menthol cigarette manufacturing plants, warehouses, offices.
- ❖ Wholesalers: Includes firms involved in the distribution and storage of menthol cigarettes.
- ❖ Retailers: Includes firms involved in the sale of menthol cigarettes. This sector includes retail establishments (e.g. grocery stores, convenience stores, gas stations, menthol stores, etc.)

The IMPLAN model is designed to run based on the input of specific direct economic factors. It generates estimates of the other direct impacts, tax impacts and indirect and induced impacts based on these entries. In the case of the menthol model, direct employment in the menthol cigarette industry is a starting point for the analysis. Direct employment is based on data provided to John Dunham & Associates by Infogroup, RAI, and the Food and Drug Administration as of January 2017. Infogroup data are recognized nationally as a premier source of micro industry data. Infogroup is the leading provider of business and consumer data for the top search engines and leading in-car navigation systems in North America. Infogroup gathers data from a variety of sources, by sourcing, refining, matching, appending, filtering, and delivering the best quality data. Infogroup verifies its data at the rate of almost 100,000 phone calls per day to ensure absolute accuracy.

⁵ Based on data from *The Menthol Industry Economic Impact Study*, Prepared for Reynolds American, Inc., by John Dunham & Associates, May 1, 2019

⁶ The model uses 2016 input/output accounts.

⁷ The IMPLAN model is based on a series of national input-output accounts known as RIMS II. These data are developed and maintained by the U.S. Department of Commerce, Bureau of Economic Analysis as a policy and economic decision analysis tool.

Once the initial direct employment figures have been established, they are entered into a model linked to the IMPLAN database. The IMPLAN data are used to generate estimates of direct wages and output. Wages are derived from data from the U.S. Department of Labor's ES-202 reports that are used by IMPLAN to provide annual average wage and salary establishment counts, employment counts and payrolls at the county level. Since this data only covers payroll employees, it is modified to add information on independent workers, agricultural employees, construction workers, and certain government employees. Data are then adjusted to account for counties where non-disclosure rules apply. Wage data include not only cash wages, but health and life insurance payments, retirement payments and other non-cash compensation. It includes all income paid to workers and proprietors/partners by employers.

Total output is the value of production by industry in a given state. It is estimated by IMPLAN from sources similar to those used by the BEA in its RIMS II series. Where no Census or government surveys are available, IMPLAN uses models such as the Bureau of Labor Statistics' growth model to estimate the missing output.

The model also includes information on income received by the Federal, state and local governments, and produces estimates for the following taxes at the Federal level: Corporate income, payroll, personal income, estate and gift, excise taxes, customs duties, and fines, fees, etc. State and local tax revenues include estimates of: Corporate profits, property, sales, severance, estate and gift and personal income taxes; licenses and fees and certain payroll taxes.

While IMPLAN is used to calculate the state level impacts, Infogroup data provide the basis for New York City level estimates. Publicly available data at the county and local level is limited by disclosure restrictions, especially for smaller sectors of the economy. This model therefore uses actual physical location data provided by Infogroup in order to allocate jobs – and the resulting economic activity – by physical address or when that is not available, zip code. For zip codes contained in a single congressional district, jobs are allocated based on the total sector jobs in each zip. For zip codes that are broken by congressional districts, allocations are based on the percentage of total jobs physically located in each segment of the zip. Physical locations are based on either actual address of the facility, or the zip code of the facility, with facilities placed randomly throughout the zip code area.

Demand Model

Once the base economic impact of the menthol cigarette industry is developed, the effects of the proposed ban are calculated using a standard demand model. When New York City bans the sale of menthol cigarettes, adults who prefer these products will react in one of four ways. They could:

- 1) Stop smoking cigarettes or switch to another tobacco product;
- 2) Switch from smoking menthol cigarettes to tobacco flavored cigarettes;
- 3) Continue to smoke menthol cigarettes but purchase them from other parts of New York State;
- 4) Continue to smoke menthol cigarettes but purchase them from other states and jurisdictions, or over the black market.

In the case of this analysis, two of these factors matter. Since no menthol cigarettes will be legally sold in New York City, the fact that consumers are switching to the black market or purchase their tobacco products outside of the City does not impact either the revenue or economic impact projections. The bottom line is that 100 percent of the taxable menthol cigarette sales will disappear.

If adult smokers decide to continue to smoke menthol cigarettes and purchase them in New York State, there will be a small countervailing benefit to the rest of the state’s economy, which is calculated in this analysis.

Finally, adult smokers could switch to non-menthol cigarettes, and this would mitigate the lost sales in New York City.

In order to calculate the effect of the ban on cigarette sales in the City, it is essential to know how consumers would react – both in terms of the percent of purchases outside of the City (but still within New York State), but also in terms of what percent would switch to other cigarette products. These percentages are called elasticities by economists. Cigarette elasticities have been studied in depth, but most academic research has focused on the effects of taxes on demand, or on the substitution effects of vapor products.

One comprehensive study on the menthol cigarette market was conducted by Compass Lexecon for Lorillard Tobacco Company in 2011.⁸ This study provides a series of estimates on all the different elasticities required for this model.

According to the Compass Lexecon analysis, the cross-elasticity of demand between menthol and non-menthol cigarettes ranges from 0.28 to 0.42. This means that a 100 percent reduction in the sale of menthol cigarettes (as would happen under the proposed ban) would lead to an increase of non-menthol cigarettes equal to between 28 and 42 percent of the initial menthol product demand. For this analysis of the proposed ban the most conservative estimate – 0.42 – was used, meaning that the analysis assumes the least impact to New York City’s economy from the proposed ban.

In addition, the Compass Lexicon report provided a series of additional elasticities related to quitting and black-market sales. Since any non-reported sale of cigarettes to a New York City consumer from any other source would technically be a black-market sale under the methodology used in the analysis, the difference between 1.0 and the sum of the switching and quitting elasticities would equal the black-market elasticity. Some of these sales would go to New York State retailers (outside of the city limits). Currently, according to the Tax Foundation, the black-market sales in New York State are already equal to 56.8 percent of the market.⁹ Taking the inverse of this (43.2 percent) would equal the legal sales. Assuming that the black-market rate stays constant, then the shift from New York City to New York State sales would be 0.28 multiplied by 0.43, or 0.12. This means that 12 percent of lost menthol sales would transfer to New York State.

With these substitution percentages, the effect of the ban on both New York City and New York State sales can be calculated. See Table 6 below.

Table 6
State and City Impacts Resulting from A Menthol Cigarette Ban in New York City

	Direct		Supplier		Induced		Total	
	NYC	NYS	NYC	NYS	NYC	NYS	NYC	NYS
Jobs	(371)	77	(277)	20	(588)	50	(1,236)	147
Wages	\$ (21,257,275)	\$ 4,431,480	\$ (27,369,386)	\$ 1,948,136	\$ (39,736,931)	\$ 3,377,181	\$ (88,363,592)	\$ 9,756,797
Economic Output	\$ (49,874,256)	\$ 9,932,157	\$ (105,710,016)	\$ 9,260,307	\$ (114,270,946)	\$ 9,575,368	\$ (269,855,218)	\$ 28,767,832

⁸ *Estimating Consequences of a Ban on the Legal Sale of Menthol Cigarettes*, prepared by Compass Lexecon for Lorillard Tobacco Company, January 19, 2011. On-line at: https://www.thecre.com/ccsf/wp-content/uploads/2011/03/compass_1_19_2011.pdf According to its website, Compass Lexecon is *one of the world’s leading economic consulting firms*.

⁹ Drenkard, Scott, *Cigarette Taxes and Cigarette Smuggling by State, 2015, FISCAL FACT No. 565*, The Tax Foundation, November 6, 2017. On-line at: <https://files.taxfoundation.org/20171106130335/Tax-Foundation-FF565.pdf>

As the table shows, 1,236 jobs directly related to the sale of cigarettes will be lost in New York City, offset by 147 jobs gained upstate, and 10.6 percent of the economic loss to the City would be made up for by economic gains in the upstate economy. These effects are due to adult smokers purchasing their menthol cigarettes in New York, but outside of New York City.

Cigarette Sales and Tax Revenues

Cigarette tax revenues are driven by both the volume of cigarettes sold in a particular jurisdiction as well as the price. Actual sales volumes in New York City are not directly available from public data; however, they can be calculated.

According to the most recent edition of the *Tax Burden on Tobacco*, New York City collected a total of \$66,227,400 in cigarette taxes in 2018.¹⁰ The current tax rate in the City is \$1.50 per pack, so this equates to an estimate of 44,151,600 packs. Of these, 17,121,990 packs are assumed to be menthol cigarettes.¹¹

The average retail price for a pack of cigarettes (less sales taxes) in New York City is calculated to be \$13.16.¹² This price estimate is calculated based on the retail output (or gross margin) from the economic impact model. Dividing gross output by the retail margin of 0.2399 provides an estimate of the price of cigarettes prior to taxes.¹³ The final price of \$13.16 per pack, is calculated by adding in Federal, state and local excises, as well as the MSA payment.

Based on the price of \$13.16 per pack, a total of \$225.3 million worth of menthol cigarettes are currently sold on an annual basis in New York City. With a city sales tax of 4.5 percent, this generates a total of more than \$26.1 million in sales tax revenues.

If the sale of menthol cigarettes were banned in New York City, the entire \$225.3 million worth of sales would be lost. Based on the elasticities the lost menthol sales would be offset by gains in other cigarette sales of 7.2 million packs, or about \$94.6 million. (Table 7)

Table 7
State and City Impacts Resulting from A Menthol Cigarette Ban in New York City

	Existing		After Ban	
Total Packs		44,151,600		34,220,846
Total Value	\$	581,087,233	\$	450,386,768
Menthol Packs		17,121,990		-
Menthol Value	\$	225,345,629	\$	-
Non-Menthol Packs		27,029,610		34,220,846
Non-Menthol Value	\$	355,741,604	\$	450,386,768

¹⁰ *The Tax Burden on Tobacco* Volume 53, Orzechowski and Walker, 2018.

¹¹ 38.8 percent.

¹² The minimum sale price for a pack of cigarettes in New York City is \$13.00 as per Local Law 2017/145. See: *NYC Rules: Cigarette*, at: <https://rules.cityofnewyork.us/tags/cigarette>

¹³ See: *Margins After Redefinitions: 2007 Detail*, Industry Economic Accounts Directorate, Bureau of Economic Analysis (BEA), U.S. Department of Commerce.