

Methodological Appendix

To calculate the benefits of the New York City Department of Consumer and Worker Protection's proposed rule, we have applied the methodology used by the Federal Trade Commission (FTC) in its [similar rulemaking](#) with appropriate adjustments for New York City. These measured benefits come exclusively in the form of time saved canceling unwanted subscriptions and, in the case of in-person cancellation, additional months of incurred costs after unsuccessful efforts to cancel a subscription.

Annual Benefits

To calculate the rule's annual benefits, we estimated the benefit of the rule for the New York City adult population per year for each of four scenarios. These scenarios are cancellations of subscriptions (1) entered into in person; (2) that currently offer online enrollment and only telephone cancellation; (3) that currently offer online enrollment and online cancellation; and (4) that currently offer telephone enrollment and telephone cancellation. First, we estimate the dollar value savings from the rule to a New York City adult of a single cancellation in each scenario. (For each scenario, we generate a "low" savings estimate and a "high" savings estimate, with each depending on certain assumptions provided by the FTC.) Then, we estimate the number of cancellations per year for New York City adults in each scenario. We next multiply the estimate of the dollar value savings from the rule for a cancellation in each scenario by the number of cancellations per year for each scenario, giving us a "low" and "high" estimate of benefits for each scenario. Finally, we add up the four "low" estimates and the four "high" estimates, respectively, to come to "low" and "high" total estimated yearly benefits.

We also perform a sensitivity analysis using different numerical assumptions and, in that subsection, discuss factors that could lead our estimates to overstate or understate the benefits of the rule. On balance, it seems likely that our estimates may significantly underestimate the benefits of the rule due to effects that the FTC did not attempt to quantify.

Assumptions and Adjustments for New York City

We follow the FTC's methodology for estimating the dollar value savings from the rule of a cancellation in each scenario, with certain adjustments to New York City wage levels in 2024 (the most recent available) and prices, and update figures for inflation to 2024 levels. We make no adjustments to the FTC's assumptions and estimates about how long it now takes to

cancel subscriptions online, by phone, and in person. We also follow the FTC's estimates about how long it will take to cancel subscriptions in each manner under the rule.¹

To adjust the dollar value savings of cancellation in each scenario from the national average to New York City, we vary the FTC's calculations in two ways. First, because all of the calculations rely on the dollar value of nonwork time, we calculate and substitute the dollar value of nonwork time for an adult in the New York metropolitan area for the national average dollar value of adult nonwork time used by the FTC. Second, because the "high" estimate of the rule's savings for cancellations of subscriptions entered into in person includes monthly costs of delayed in-person subscription cancellations, we adjust this figure for cost of living in New York, using regional price parities, and for inflation.

The most recent information on mean hourly wages from the Bureau of Labor Statistics for the New York metropolitan area [appears to be from May 2024](#). Accordingly, we use statistics from 2024 throughout our analysis, though as noted below this may underestimate the yearly benefits of the rule as wages and prices have grown and may continue to grow further. The [mean hourly wage](#) in the New York metropolitan area in May 2024 was \$40.65. Assuming that consumers, on average, value their nonwork time at 82 percent of the mean hourly wage, we estimate that New York City adults value their nonwork time at \$33.33 per hour. Additionally, we adjust the FTC's high-end estimate of the average monthly cost of a subscription requiring in-person cancellation—a gym membership that cost \$70 in 2023—for inflation to \$71.67 in 2024 and then for the higher cost of living in the New York metropolitan area to \$80.98.

To estimate the number of subscription cancellations per year for New York City adults in each scenario, we follow the FTC's assumptions about how many subscriptions an American adult has and cancels each year. We also follow the FTC's assumptions and estimates about how many of the total number of subscription cancellations fall into each scenario. To adjust the total number of subscription cancellations for New York City, we estimate the adult population of New York City rather than using the national adult population. (We do not assume any difference in subscription frequency between New Yorkers and national averages.) We estimate the adult population of New York City in 2024 to be 6,765,501.²

¹ The manner of cancellation prescribed by the proposed rule seems identical in relevant respects to the manner of cancellation provided in the FTC rule.

² There were 8,478,072 people [living in New York City](#) in 2024, 20.2 percent of whom were under the age of 18.

Calculations

Following the FTC, we assume that the rule will save a consumer between 5 minutes and 3 seconds and 5 minutes and 33 seconds to cancel a subscription that currently offers **online enrollment and only telephone cancellation**, because the consumer will now be able to cancel online in the manner prescribed by the rule. Accordingly, our low estimate is that the rule will save a New York City adult \$2.81 for each cancellation in this scenario and our high estimate is \$3.08 for each cancellation in this scenario.

We assume that the rule will save a consumer between 1 minute and 4 seconds and 1 minute and 34 seconds to cancel a subscription that currently offers **online enrollment and online cancellation**, because the consumer will now be able to cancel online in the manner prescribed by the rule. Accordingly, our low estimate is that the rule will save a New York City adult \$0.59 for each cancellation in this scenario and our high estimate is \$0.87 for each cancellation in this scenario.

We assume that the rule will save a consumer between 4 minutes and 3 seconds and 5 minutes and 3 seconds to cancel a subscription that currently offers **phone enrollment and phone cancellation**, because the consumer will now be able to cancel by phone in the manner prescribed by the rule. Accordingly, our low estimate is that the rule will save a New York City adult \$2.25 for each cancellation in this scenario and our high estimate is \$2.81 for each cancellation in this scenario.

Finally, following the FTC, we assume that the rule will save a consumer between 1 minute and 4 seconds on the low end and 4 hours plus 3 months of gym membership on the high end to cancel a subscription entered into **in person**. Accordingly, our low estimate is that the rule will save a New York City adult \$0.59 for each cancellation in this scenario and our high estimate is \$376.26 for each cancellation in this scenario.

We assume that 83 percent of consumers have at least 1 subscription, that the average subscriber has 4.5 subscriptions, and that 36 percent of subscriptions get canceled every year. Accordingly, we estimate that New York City adults have 25,269,146 subscriptions and in turn estimate that New York City adults cancel 9,096,893 subscriptions per year.

Following the FTC, as a proxy for the number of canceled subscriptions that were entered into in person per year, we use the number of canceled gym memberships, as well as the statistics that 19 percent of the adult population is a member of a gym and that 28.6 percent of all adult gym members cancel their memberships each year. Accordingly, we estimate 367,637 cancellations per year for New York City adults for in-person subscription

enrollments. We assume all subscriptions that are not entered into in person are instead entered into either online or over the phone. Subtracting the in-person subscription enrollment cancellations from the total number of cancellations, we estimate that 8,729,256 subscriptions entered into online or over the phone are canceled by New York City adults each year.

We assume that, among canceled subscriptions that are entered into online or over the phone, 66.7 percent of them offered online enrollment and only telephone cancellation, 11.1 percent of them offered online enrollment and online cancellation, and 22.2 percent offered telephone enrollment and telephone cancellation. Accordingly, we estimate that 5,822,414 subscriptions that offered online enrollment and only telephone cancellation are canceled by New York City adults each year; 968,947 that offered online enrollment and online cancellation; and 1,937,895 that offered telephone enrollment and only telephone cancellation.

We then multiply the savings per subscription cancellation for the low and high estimates for each scenario by the number of subscription cancellations in each scenario to generate low and high savings for each category. We then add up these numbers to generate total low and high savings estimates:

Low and High Savings Estimates

Category	Number of subscription cancellations per year	Savings per subscription cancellation		Total savings per category per year	
		Low	High	Low	High
In person to online	367,637	\$0.59	\$376.26	\$219,906	\$138,327,098
Telephone to online	5,822,414	\$2.81	\$3.08	\$16,360,983	\$17,933,035
Online to faster online	968,947	\$0.59	\$0.87	\$571,669	\$842,984
Telephone to faster telephone	1,937,895	\$2.25	\$2.81	\$4,360,264	\$5,445,485
Total (Low Estimate)		\$21,509,832			
Total (High estimate)		\$162,548,602			

Sensitivity Analysis

Following the FTC, we also conducted a sensitivity analysis by modifying the share of canceled subscriptions in each scenario, and adding an additional scenario for canceled subscriptions that may already be compliant with the rule. We divide the number of FTC-estimated subscriptions in each scenario by the FTC's total estimate of canceled subscriptions per year in order to derive the percentage of canceled subscriptions in each of the (now) five scenarios, and assume that those percentages are the same in New York City. Accordingly, we estimate that 18 percent of subscriptions are already compliant, 4 percent are in-person subscription enrollments, 18 percent are in-person enrollments with only telephone cancellation, 1.9 percent are telephone enrollments with only telephone cancellation, and the remaining 59 percent are online enrollments and online cancellation. Using these ratios results in a low estimate of the yearly benefits of \$8,371,415 and a high estimate of \$147,110,418.80 per year.

We also note factors that could lead our estimates to overstate or understate the benefits of the rule. On the overstatement side, it is possible that it is actually currently easier to cancel subscriptions in New York City than it is nationally, such that the rule would change behavior less than we have estimated. For example, relevant existing New York state law could conceivably affect the existing behavior of subscription providers in New York City, such that the New York City rule could provide savings that are less than the FTC's estimates with respect to the average consumer nationwide because it is currently easier to cancel a subscription in New York than nationally. However, we have not conducted an analysis of how New York state law differs from the law of all other states (and indeed it is also possible that New York state law is actually less strict than the average state's laws, which would suggest our estimate of benefits is actually understated). It is also possible that New Yorkers are more likely to cancel expensive in-person subscriptions, such as gym memberships, faster than the national average, if, for example, travel time and the inconvenience of returning to the location is less than the national average in New York City, or if the relatively high cost of those subscriptions in New York motivates people to cancel them faster. This would cause our "high" estimate of the benefits of the rule to be overstated.

On the understatement of benefits side, our estimates rely on statistics for 2024 for the relevant wages, population, and costs in New York because the most recent estimate of wages available from the Bureau of Labor Statistics is for May 2024. However, these statistics may all understate the benefits of the rule as wages, populations, and costs have grown and may continue to grow. Our methodology only calculates benefits to consumers, so it underestimates cost savings to small businesses canceling subscriptions. Our

cost-of-living adjustment for in-person subscription cancellations may also underestimate the relevant cost of living in New York City, since gym memberships in New York City are, according to some sources, the highest in the nation and substantially higher than a cost-of-living adjustment would suggest.³ If so, our “high” estimate of the benefits of the rule may be too low.

Moreover, our estimates may significantly underestimate the benefits of the rule due to effects that the FTC did not attempt to quantify. Specifically, New Yorkers may benefit from a more competitive marketplace in which companies, aware that it is now easier to cancel subscriptions, provide better quality or prices to keep consumers from cancelling. Further, the rule may improve consumer confidence in using subscriptions and increase the number of consumers who are willing to subscribe and obtain the convenience, and often cost savings, that subscriptions can provide. New York consumers may also be spared the cost of additional unwanted subscriptions that are easier to cancel (such as online subscriptions that the rule makes easier to cancel). Additionally, as the FTC noted, the estimates of quantified benefits are based on reductions in time and effort from cancelling subscriptions to consumers, but small businesses may also benefit from less burdensome cancellation procedures.

Ten-Year Benefits

Following the FTC, we also calculated the total benefits of the rule over a 10-year period by increasing the number of estimated cancellations and corresponding benefits of the rule based on expected population growth and then discounting those results using a 2 percent discount rate. To estimate the population of New York City in years beyond 2024, we used New York City’s [own population estimates](#) for years 2030 and 2035, linearly extrapolating the population from 2024 to 2030 and from 2030 to 2035. We first increase the corresponding benefits based on this population growth and then discount those results using the 2 percent discount rate. Finally, we add up those results to generate a present discounted value of benefits over 10 years:

³ See Anna Rahmanan, [NYC Is the Most Expensive City to Get a Gym Membership in the US](#), TimeOut New York (Sept. 12, 2022) (estimating the average monthly price for an adult gym membership in New York to be \$106.06).

Total Quantified Benefits (in 2024 dollars)

Year #	Low	High
1	\$21,079,635	\$159,297,629
2	\$20,772,536	\$156,976,894
3	\$20,469,288	\$154,685,269
4	\$20,169,861	\$152,422,519
5	\$19,874,224	\$150,188,404
6	\$19,582,344	\$147,982,681
7	\$19,294,190	\$145,805,119
8	\$18,994,646	\$143,541,478
9	\$18,699,365	\$141,310,061
10	\$18,408,298	\$139,110,485
Total*	\$197,344,388	\$1,491,320,543

*(Present discounted value of benefits over 10 years, 2% discount rate)