Store Exit After Structural Merger Remedies in the U.S. Grocery Industry*

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Abstract

Asset divestitures are commonly used as structural remedies to mitigate the anti-competitive effects of mergers. However, their design often involves policy debates, and their effectiveness is understudied. This paper asks whether stores divested as structural remedies are more likely to exit the market. Using panel data on grocery stores in the United States, I examine exit behavior of divested stores relative to comparable non-divested stores. Conditional on controls, divested stores exhibit higher exit rates: one-year exit is 3.1–5.5 percentage points higher (about 37–58% relative to baseline exit rates of 8–10%), and three-year exit is 4.6–6.9 percentage points higher (about 58–69%). Observed survival durations are about 2.6–3.5 years shorter (about 53% relative to a baseline of about 6.5 years). These patterns are consistent with concerns about buyer viability in remedy design.

Keywords Merger Remedy, Divestiture, Antitrust, Grocery

JEL Classification L25, L41, L81

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1 Introduction

Asset divestitures are commonly used by competition authorities to mitigate the anticompetitive effects of mergers. In the U.S., 37.9% of mergers that receive a second request are approved subject to conditions (Billman and Salop, 2023). These conditions—often called remedies—typically require the merging firms to divest physical assets or business units. Taking the grocery industry as an example, the grocery store is required to be sold to third-party firms. These divestitures are considered as an effective tool by competition authorities because they can directly reduce the market power of the merged firm and promote competition by allowing other firms to utilize the divested assets.

However, the design of the structural remedy often involves policy debates. An anecdotal example is the merger case between Albertsons and Safeway in 2015. The merger would have created the second-largest grocery chain by store count and sales in the U.S. As a condition, the parties had to sell 168 stores across eight states to four third-party buyers. The largest buyer, however, went bankrupt within eight to nine months due to the rapid expansion of the stores, and many of the stores were later repurchased by Albertsons or closed. Since then, competition authorities have been more cautious about both which stores to divest and how to select suitable buyers.

This paper asks whether stores divested as a structural remedy exhibit higher exit rates using panel data of grocery stores in the U.S. I link FTC's remedy orders to store-level panel data to build a sample of divested and non-divested grocery stores. First, I examine the factors that determine which stores are selected for divestiture as part of a merger remedy. Next, I estimate conditional associations between divestiture by remedy and store exit and ownership change. Additionally, I document conditional differences in observed survival duration associated with divestiture by remedy. For each analysis, I use fixed effects models and inverse probability weighting (IPW) with control groups defined within remedied firms, remedied markets, and their intersection to benchmark against similar merger exposure. These estimates adjust for observed selection but should be interpreted as conditional correlations rather than causal effects.

The U.S. grocery industry is a good setting to empirically study the effectiveness of

divestiture as a merger remedy. First, there are frequently mergers in the grocery industry, and many of them are approved with merger remedies. Second, divestiture can directly be identified because stores are the target of the divestiture, and the store's address are publicly available through the FTC's order documents. Third, grocery stores are geographically dispersed, and many markets are observed in the data, which is suitable to empirical study.

Conditional on controls, divested stores exhibit higher exit and shorter observed survival: one-year exit is 3.1–5.5 pp higher (about 37–58% relative to baseline exit rates of 8–10%), three-year exit is 4.6–6.9 pp higher (about 58–69%), and survival is 2.6–3.5 years shorter (about 53% relative to a baseline of about 6.5 years). Ownership-change estimates are mixed and not statistically significant. These patterns are consistent with concerns about buyer viability in remedy design.

This paper contributes to the literature on merger remedy. The theory on the optimal structural remedies when competition authorities have the goal of consumer surplus is studied by Nocke and Rhodes (2025). The empirical study on the effect of divestiture remedy is conducted by Friberg and Romahn (2015). Despite their policy importance, there exists only a small literature both theoretically (Vergé (2010) and Nocke and Rhodes (2025)) and empirically (Friberg and Romahn (2015) and Osinski and Sandford (2021)) that examines the effectiveness of merger remedies. This paper contributes empirical evidence on the exit behavior of stores divested as structural remedies.

The structure of the paper is as follows. In Section 2, I provide the institutional background of the U.S. grocery industry and the antitrust concerns and merger remedies. In Section 3, I describe the data and empirical strategy. Section 4 presents the results. Section 5 concludes.

2 Institutional Background

2.1 Mergers in the U.S. Grocery Industry

Competition in the grocery industry is local. Consumers choose among nearby stores within a short driving distance, and retailers compete on prices, assortment, and in-store services

within these geographically segmented markets. A recent study by DellaVigna and Gentzkow (2019) finds that the grocery stores in the U.S. are more likely to use uniform pricing than the other industries. Therefore, store entry plays a particularly important role for their profits in this industry.

Over the past two decades, the industry has experienced substantial consolidation as firms have increased their economies of scale in procurement, distribution, and marketing, as well as denser store networks that allow them to spread fixed costs over a larger sales base. Table 1 summarizes major grocery mergers since the mid-2000s that are relevant for this paper. One of the largest transactions in terms of store count is the 2015 merger between Albertsons and Safeway, which combined two major chains operating across multiple states. More recently, Kroger and Albertsons tried to merge, but the merger was blocked by the FTC. These cases illustrate the ongoing consolidation of supermarket chains and the repeated need for merger control in this industry.

Table 1: Major Grocery Store Mergers and Acquisitions

Year	Buyer	Target	Divested Stores
2007	Great Atlantic & Pacific Tea (A&P)	Pathmark Stores	5
2007	Whole Food	Wild Oats	0
2010	Tops	Penn Traffic	7
2012	Ahold	Genuardi (from Safeway)	1
2013	Albertson	United	2
2014	Bi-Lo	Delhaize	12
2015	Albertsons	Safeway	168
2016	Ahold	Delhaize	81
2021	Price Chopper	Tops	12

Note: This table shows major grocery store mergers and acquisitions and the number of stores divested in each case; divestiture counts are taken from FTC consent orders.

2.2 Antitrust Concerns and Merger Remedies

When the FTC concludes that a proposed merger is likely to substantially lessen competition in some of these local markets, it may approve the transaction subject to structural remedies. The typical process involves several steps. First, the FTC staff identify specific local markets where the merger would significantly increase concentration, often using measures such as

the HHI and post-merger market shares. Second, in each problematic market, the FTC and the merging parties negotiate a remedy package specifying which stores must be divested to restore or preserve competition. Third, the parties are required to sell these stores to approved buyers with the goal of ensuring that the divested assets remain viable competitors. The final remedy is formalized in a consent order that enumerates the addresses of the stores to be divested.

The design of these structural remedies has been the subject of policy debate. An anecdotal example is the Albertsons/Safeway merger approved in 2014, in which 168 stores were ordered to be sold to four third-party buyers. The largest buyer experienced financial distress and filed for bankruptcy less than a year after the transaction, leading to many of the divested stores being reacquired by Albertsons. This episode raised concerns that some remedy packages may involve stores or buyers that are not viable in the long run, potentially undermining the competitive goals of the remedy. In response, competition authorities have increasingly emphasized the importance of carefully selecting both the specific stores to be divested and the buyers' financial and operational capabilities. The aim of this paper is to empirically examine the consequences of structural remedies in the U.S. grocery industry.

3 Data

In this section, I describe the data used in this paper and its suggestive empirical evidence.

3.1 Data Source

I use the dataset collecting business establishments in the U.S. by Infogroup Inc. (previously known as InfoUSA). Each establishment in this dataset contains company name, ownership information, NAICS code, address, latitude, longitude, sales, and number of employment from 1994 onward.

Given that the focus of this paper is the grocery industry, I construct the sample by the following steps. I keeps the establishments with NAICS starting with 445 (grocery stores), but I drop convenience stores (NAICS code 44512), Specialty Food Stores (NAICS code 4452), and Beer, Wine, and Liquor Stores (NAICS code 4453). I also keep the establishments

with NAICS starting with 452 (general merchandise stores) to include supercenters (Walmart/Target/Meijer/Fred Meyer, etc.) and club stores (Costco/Sam's Club/BJ's Wholesale Club, etc.). Lastly, I restrict the sample to chains as companies operating at least five stores within a single Metropolitan Statistical Area.

I collect the addresses of the stores that are divested as a structural remedy from the FTC's order documents for each merger case. For example, in the Albertsons/Safeway merger case, the FTC ordered the parties to sell 168 stores to four third-party buyers. The addresses of the divested stores are documented in the FTC's order documents.[1]

3.2 Descriptive Statistics

The summary statistics of the sample are shown in Table 2. Even though it might be possible to have missing observations in the database, the number of stores is around 30,000, which is close to the number of grocery stores in the U.S. The annual entry rate and exit rate are 10.0% and 9.4%, which are consistent with the paper analyzing the grocery industry.

I define Large, Medium, or Small grocery chains if their maximum nationwide store count is at least 100, between 11 and 99, or 10 or fewer, respectively. Supercenters and club stores are defined if they match specific trade names (e.g., Walmart, Target, Costco, Sam's Club, etc.). For each store, I calculate the number of stores within 2 miles, 5 miles, and 10 miles for each category using the longitude and latitude of the store. I also calculate the number of distinct chains, rather than stores, within a given distance. These variables indicate the competitive environment of the stores and are used as control variables in the empirical analysis.

Table 3 shows summary statistics for the stores that are divested as a structural remedy for each merger case. Since the database is not complete, not all divested stores are observed in the data, but I could collect 214 out of 295 divested stores. For the same reason, 176 out of 295 acquired stores are observed in the data.

Tracking the exit behavior of the acquired stores, the exit rate is 48.8% within 1 year, 68.2% within 3 years, and 74.1% within 5 years. These rates are higher than the annual entry rate and exit rate shown in Table 2, indicating that stores that are divested as a structural

[1] https://www.ftc.gov/system/files/documents/cases/150127cereberusagreeorder.pdf

remedy are more likely to exit the market than the other grocery stores on average. The aim of the regression analysis in the following sections is to quantify this difference more systematically.

Table 2: Summary statistics for grocery MSA cleaned

variable	mean	sd	min	max
Panel A: Annual summary				
Num stores	29189.1	1044.0	27400.0	30630.0
Entry rate (%)	10.0	4.3	5.1	22.8
Exit rate (%)	9.4	3.7	4.5	16.3
Exit within 3 years rate (%)	9.5	3.4	6.0	15.7
Exit within 5 years rate (%)	9.7	3.4	6.4	15.1
Ownership Change rate (%)	4.1	2.8	0.8	11.0
Ownership Change within 3 years rate (%)	4.5	2.8	0.9	11.0
Ownership Change within 5 years rate (%)	4.2	2.3	1.0	7.6
Panel B: Store summary				
Sales	23469.6	27161.2	0.0	8645000.0
Employment	110.4	148.8	1.0	35000.0
Supercenter <2mi	1.0	1.0	0.0	9.0
Supercenter 2-5mi	2.8	2.6	0.0	25.0
Supercenter 5-10mi	6.9	6.5	0.0	57.0
Club <2mi	0.3	0.5	0.0	6.0
Club 2-5mi	0.8	1.0	0.0	9.0
Club 5-10mi	1.9	2.3	0.0	20.0
Large <2mi	2.9	3.3	0.0	42.0
Large 2-5mi	10.0	11.8	0.0	129.0
Large 5-10mi	24.8	29.4	0.0	241.0
Medium <2mi	1.3	3.3	0.0	60.0
Medium 2-5mi	4.4	10.0	0.0	131.0
Medium 5-10mi	10.5	21.8	0.0	231.0
Small <2mi	0.3	1.0	0.0	17.0
Small 2-5mi	1.1	3.2	0.0	54.0
Small 5-10mi	2.7	6.8	0.0	82.0
Chains overall <2mi	5.2	4.4	1.0	50.0
Chains overall 2-5mi	14.3	13.8	1.0	134.0
Chains overall 5-10mi	15.9	14.9	1.0	108.0

Note: This table shows summary statistics for the grocery-store sample; Panel A reports annual aggregates and rates (percent), and Panel B reports store-level variables; distance bands are in miles.

Table 3: Store Exit Probabilities by Merger Case

Merger Case	# Stores	Divested	Acquired	Exit ≤ 1y (%)	Exit ≤ 3y (%)	Exit ≤ 5y (%)
A&P & Pathmark Stores (2008)	6	3	2	100.0	100.0	100.0
Tops & Penn Traffic (2010)	7	2	2	0.0	50.0	100.0
Ahold & Genuardi (Safeway) (2013)	1	0	0			
Albertson & United (2013)	2	0	0			
Bi-Lo & Delhaize (2014)	12	3	4	50.0	75.0	75.0
Albertsons & Safeway (2015)	168	123	95	74.6	86.8	88.6
Ahold & Delhaize (2017)	87	74	64	12.9	45.7	58.6
Price Chopper & Tops (2022)	12	9	9	0.0	0.0	0.0
Total	295	214	176	48.8	68.2	74.1

Note: This table shows store counts and exit rates by merger case; divested and acquired counts are those observed in the data, exit rates are percentages of acquired stores, and blank cells indicate insufficient observations.

4 Empirical Strategy

In this section, I describe the empirical strategy used in this paper. I first estimate the linear probability model for the divestiture by remedy with the following reduced-form equation:

$$D_i = \mathbb{1}\{X_i'\beta + \delta_{m(i)} + \varepsilon_i > 0\} \tag{1}$$

where i is the store, D_i is the dummy variable for the divestiture by remedy, X_i is the vector of control variables, $\delta_{m(i)}$ is the fixed effect for the Metropolitan Statistical Area of the store, and ε_i is the error term. The control variables include the employment of the store, the number of competitors within 2 miles, 5 miles, and 10 miles for each category, and the number of distinct chains within a given distance.

Then, I estimate the effect of the divestiture by remedy on the various outcomes of the stores with the following outcome equation:

$$Y_{it} = \mathbb{1}\{\theta_1 D_{it} + X_{it}'\beta + \delta_{m(i)} + \eta_t + \varepsilon_{1it} > 0\} \tag{2}$$

where t is the year, Y_{it} is the outcome variable, X_{it} is the vector of control variables, η_t is the fixed effect for the year. The outcome variables include the exit behavior and ownership change of the stores within 1 year, 3 years, and 5 years. I define the exit behavior as the store is not observed in the data in the subsequent year, and the ownership change as the

store is sold to a different chain in the subsequent year.

Lastly, I estimate the effect of the divestiture by remedy on the observed survival duration with the following equation:

$$T_j = \theta_2 D_j + X_j'\beta + \delta_{m(j)} + \varepsilon_{2j} \tag{3}$$

where T_j denotes the observed survival duration (in years) of store j and D_j is the dummy variable for the divestiture by remedy.

I briefly discuss the identification for each equation. The competition authorities select which stores should be divested considering the concentration of the stores in each geographic market as discussed in section 2. Grocery chains could choose to divest stores with weak competitive position, but the variable for the number of employees could capture the potential profitability of the stores because high correlation between the number of employees and the profit is known in this industry. Thus, it is reasonable to assume that this selection equation (1) is correctly specified conditional on these observables, which allows me to identify the parameters in this equation. The identification problem in the outcome equations (2) and (3) is selection bias, meaning that stores with weaker competitive positions are more likely to be sold as a structural remedy. To address this problem, I used the fixed effects approach with specific control groups and the inverse probability weighting (IPW) approach. First, I estimate the fixed effects model with the control groups. The control groups are defined as the set of the stores that are not divested as a structural remedy for the merged firms, the set of the stores that are not divested as a structural remedy for the markets involved in the merger, and the set of the stores that are not divested as a structural remedy for the firms and markets that are involved in the merger. Second, utilizing the selection equation (1) to calculate the propensity score, I apply the inverse probability weighting approach to the outcome equations. These approaches help to mitigate selection on observables and improve the comparability between divested and non-divested stores, but the estimates should still be interpreted as conditional correlations rather than fully causal effects.

5 Results

Table 4 summarizes the estimation results of the selection equation (1). The third column shows that the stores that have large grocery chains within 2 miles are more likely to be divested as a structural remedy. This is consistent with the fact that the competition authorities select the divested stores considering the concentration of the stores in each geographic market.

Table 4: Regression of remedy divestiture (pre) on employment (lpm)

Variable	(1)	(2)	(3)
Employment (hundreds)	-0.0077**	-0.0070**	-0.0059
	(0.0034)	(0.0034)	(0.0052)
Supercenter $<$ 2 miles		0.0023	0.0030
		(0.0031)	(0.0028)
Supercenter 2-5 miles		-0.0020	-0.0014
		(0.0014)	(0.0011)
Supercenter 5-10 miles		-0.0003	-0.0001
		(0.0006)	(0.0008)
Club $<$ 2 miles		0.0013	0.0002
		(0.0056)	(0.0067)
Club 2-5 miles		0.0028	0.0039
		(0.0029)	(0.0037)
Club 5-10 miles		-0.0010	0.0002
		(0.0017)	(0.0027)
Large-format $<$ 2 miles		0.0071***	0.0062**
		(0.0019)	(0.0024)
Large-format 2-5 miles		-0.0006	-0.0006
		(0.0007)	(0.0008)
Large-format 5-10 miles		-0.0005*	-0.0005*
		(0.0002)	(0.0003)
Chains $<$ 2 miles		-0.0026	-0.0024
		(0.0017)	(0.0014)
Chains 2-5 miles		0.0004	0.0002
		(0.0007)	(0.0007)
Chains 5-10 miles		0.0001	0.0004
		(0.0005)	(0.0003)
Mean dep. var.	0.0363	0.0363	0.0363
Observations	5,402	5,402	5,402
R^2	0.0009	0.0102	0.0399
FE (MSA)	No	No	Yes

Note: This table shows linear probability model estimates of divestiture selection; employment is in hundreds, distance measures are in miles, standard errors are in parentheses, and stars denote statistical significance.

The first main result is shown in Table 5. This table shows the effect of the divestiture by remedy on the exit behavior and ownership change of the stores. Panel A shows that the probability of exiting within one year for stores divested as a structural remedy is about 37.4% higher than that of the control group, and the probability of exiting within three

years is about 57.8% higher. These coefficients are relatively large because the average exit probability is around 8%. This result strongly suggests that the stores divested as a structural remedy are more likely to exit the market than the other stores on average.

Panel B shows the coefficient for the ownership change, For the regression using the control group of remedied firms and markets, the probability of ownership change within 1 and 3 years is about 33.0% lower than for the control group, but the probability within 5 years is about 68.3% higher. This suggests that the likelihood of ownership change increases as more time passes, which is consistent with the policy whereby competition authorities often prohibit resale of divested stores within a certain period after the initial divestiture. However, the results are mixed and mostly not statistically significant.

Table 5: Combined regression results on exit and ownership change

Panel A: Exit as outcome									
Variable	Exit within 1 year			Exit within 3 years			Exit within 5 years		
Method	OLS	OLS	IPW	OLS	OLS	IPW	OLS	OLS	IPW
Remedy Divestiture	0.0361**	0.0309*	0.0546***	0.0499***	0.0459**	0.0694***	0.0181	0.0041	0.0421
	(0.0162)	(0.0166)	(0.0190)	(0.0193)	(0.0195)	(0.0231)	(0.0253)	(0.0258)	(0.0289)
Full Sample			X			X			X
Control Group (Remedy Firms)	X			X			X		
Control Group (Remedy Firms and Markets)		X			X			X	
Observations	103,623	38,150	465,715	97,900	36,109	436,032	86,098	31,903	378,103
R^2	0.0403	0.0304	0.1529	0.0400	0.0300	0.1642	0.0410	0.0305	0.0858
Mean Dep Var	0.0823	0.0826	0.0947	0.0797	0.0794	0.1011	0.0795	0.0796	0.0938
FE (MSA)	X	X	X	X	X	X	X	X	X
FE (Year)	X	X	X	X	X	X	X	X	X

Panel B: Ownership change as outcome									
Variable	Ownership change within 1 year			Ownership change within 3 years			Ownership change within 5 years		
Method	OLS	OLS	IPW	OLS	OLS	IPW	OLS	OLS	IPW
Remedy Divestiture	-0.0146	-0.0360**	0.0082	-0.0150	-0.0365**	0.0091	0.0361***	0.0549***	0.0048
	(0.0145)	(0.0160)	(0.0106)	(0.0144)	(0.0159)	(0.0106)	(0.0119)	(0.0126)	(0.0108)
Full Sample			X			X			X
Control Group (Remedy Firms)	X			X			X		
Control Group (Remedy Firms and Markets)		X			X			X	
Observations	103,623	38,150	465,715	103,623	38,150	465,715	103,623	38,150	465,715
R^2	0.1598	0.2450	0.2428	0.1590	0.2448	0.2423	0.1113	0.1628	0.2646
Mean Dep Var	0.0768	0.1090	0.0507	0.0783	0.1106	0.0509	0.0599	0.0804	0.0333
FE (MSA)	X	X	X	X	X	X	X	X	X
FE (Year)	X	X	X	X	X	X	X	X	X

Note: This table shows OLS and IPW estimates of divestiture effects on exit (Panel A) and ownership change (Panel B) within 1, 3, and 5 years. Standard errors are in parentheses and fixed effects are as indicated.

Table 6 shows the second main result, which is the effect of the divestiture by remedy on the observed survival duration of the stores. This table shows that the observed survival duration of the stores divested as a structural remedy is about 53.3% shorter than that of

the control group. This result provides additional evidence that the divested stores are more likely to exit the market than the other stores on average. Note that I define the observed survival duration T_j as the number of years between a store's first and last appearance in the data. Stores that are still active at the end of the sample are treated as right-censored, so the survival regressions compare observed durations rather than true lifetimes.

Table 6: Combined regression results on survival duration

Variable	Survival years		
Method	OLS	OLS	IPW
Remedy Divestiture	-3.543***	-3.472***	-2.646***
	(0.265)	(0.257)	(0.350)
Employment (avg, 100s)	0.365***	0.192**	
	(0.121)	(0.092)	
Full Sample			X
Control Group (Remedy Firms)	X		
Control Group (Remedy Firms and Markets)		X	
Observations	16,559	5,676	84,095
R^2	0.087	0.080	0.165
Mean Dep Var	6.112	6.515	4.061

Note: This table shows OLS and IPW estimates of divestiture effects on survival years; standard errors are in parentheses and fixed effects and samples are as indicated.

6 Discussion

In this section, I interpret the empirical findings through two channels: selection channel and treatment channel. I define selection channel as merging chains choose to divest stores that were already more likely to exit, whereas I define treatment channel as the remedy divestiture itself increases the likelihood of store exit.

The results suggest that the selection channel may exist. Table 4 shows that stores located within 2 miles of large-chain competitors are more likely to be selected for divestiture. There are two possible explanations for this result. First, this is consistent with the FTC's policy objective, since the FTC targets markets where competition concerns are likely to arise.

Second, although the FTC requires the merging parties to divest stores in targeted markets, it does not specify which particular stores must be sold. This creates an incentive for firms to divest unprofitable stores. Although I cannot empirically disentangle these two explanations, the results are consistent with a selection channel, whereby firms divest stores that are less profitable to third-party buyers.

The findings also suggest that the treatment channel may exist. Table 5 shows that stores divested under the remedy policy are more likely to exit within a 1- to 3-year window, conditional on controls such as measures of competition and fixed effects. One possible mechanism is that, after a merger remedy transfers stores to third-party firms, changes in management systems may raise costs or reduce managerial efficiency, which in turn may increase the likelihood of store exit. While these estimates should still be interpreted as conditional correlations, they are consistent with the treatment channel operating through buyer viability.

In summary, although I cannot separately identify these two channels, the findings suggest that both the selection channel and the treatment channel may be present, and that they may lead to a consumer loss eventually. The goal of merger remedy policy is to preserve competition in local markets. Whether both channels are present, only one is present, or one is stronger than the other, the store exit behavior is contrary to the policy goal. Therefore, my findings suggest that this merger remedy policy may not have been successful in preserving consumer welfare, through either the selection channel, the treatment channel, or both.

7 Conclusion

This paper studies the effectiveness of structural remedies in U.S. grocery mergers by tracing stores that are divested as a structural remedy. Using store-level panel data, I document conditional correlations: one-year exit is 3.1–5.5 pp higher (about 37–58% relative to baseline exit rates of 8–10%), and three-year exit is 4.6–6.9 pp higher (about 58–69%). Observed survival durations are 2.6–3.5 years shorter (about 53% relative to a baseline of about 6.5 years). These results suggest that to achieve the policy goal of maintaining competition, it is important to carefully select the buyer firms.

The major limitation of this paper is the identification problem in the main specifications. I argued that the the effect of the divestiture by remedy on the interested outcome is identified by assuming that the selection equation is correctly specified and comparing the right control group. However, there could be omitted variable bias in the selection equation, which leads to biased estimation of the parameters in the outcome equations.

The natural extension of this paper is to incorporate the demand model to discuss the effect of the divestiture by remedy on the consumer surplus. Capturing the consumer's substitution pattern is crucial to evaluate the effectiveness of the change in the choice set of the stores by merger remedy. The demand estimation method proposed by Ellickson, Grieco, and Khvastunov (2020) could be applied for this purpose. Furthermore, the endogenous entry/exit behavior of the stores should be also considered to evaluate the effectiveness of the merger remedy because firms could respond to the merger remedy by entering or exiting the market, which is actually discussed in the policy debate on merger remedies. Incorporating the dynamic game framework such as Arcidiacono, Ellickson, Mela, and Singleton (2020) to discuss this dynamic consideration could be a promising direction.

References

Arcidiacono, Peter, Paul B. Ellickson, Carl F. Mela, and John D. Singleton. 2020. "The Competitive Effects of Entry: Evidence from Supercenter Expansion." *American Economic Journal: Applied Economics* 12 (3): 175–206.

Billman, Logan, and Steven C. Salop. 2023. "Merger Enforcement Statistics: 2001-2020." *Antitrust Law Journal* 85 (1): .

DellaVigna, Stefano, and Matthew Gentzkow. 2019. "Uniform Pricing in U.S. Retail Chains." *The Quarterly Journal of Economics* 134 (4): 2011–2084.

Ellickson, Paul B., Paul L.E. Grieco, and Oleksii Khvastunov. 2020. "Measuring Competition in Spatial Retail." *The RAND Journal of Economics* 51 (1): 189–232.

Friberg, Richard, and André Romahn. 2015. "Divestiture Requirements as a Tool for Competition Policy: A Case from the Swedish Beer Market." *International Journal of Industrial Organization* 42 1–18.

Nocke, Volker, and Andrew Rhodes. 2025. "Optimal Merger Remedies."

Osinski, F David, and Jeremy A Sandford. 2021. "Evaluating Mergers and Divestitures: A Casino Case Study." *The Journal of Law, Economics, and Organization* 37 (2): 239–277.

Vergé, Thibaud. 2010. "Horizontal Mergers, Structural Remedies, and Consumer Welfare in a Cournot Oligopoly with Assets." *The Journal of Industrial Economics* 58 (4): 723–741.

Appendix

A Additional Tables

Table 7: Regression of remedy divestiture (pre) on employment (logit)

Variable	(1)	(2)	(3)
Employment (hundreds)	-0.4832***	-0.4372***	-0.3843
	(0.1638)	(0.1660)	(0.3326)
Supercenter $<$ 2 miles		0.0739	0.1015
		(0.0947)	(0.0931)
Supercenter 2-5 miles		-0.0764	-0.0530
		(0.0469)	(0.0462)
Supercenter 5-10 miles		-0.0016	0.0127
		(0.0203)	(0.0317)
Club $<$ 2 miles		0.0920	0.0471
		(0.1755)	(0.2466)
Club 2-5 miles		0.1112	0.1305
		(0.0956)	(0.1324)
Club 5-10 miles		-0.0274	0.0117
		(0.0613)	(0.1111)
Large-format $<$ 2 miles		0.2415***	0.2045***
		(0.0598)	(0.0519)
Large-format 2-5 miles		-0.0083	-0.0169
		(0.0237)	(0.0327)
Large-format 5-10 miles		-0.0236***	-0.0239*
		(0.0090)	(0.0131)
Chains $<$ 2 miles		-0.1075*	-0.0932
		(0.0598)	(0.0587)
Chains 2-5 miles		0.0082	0.0031
		(0.0258)	(0.0261)
Chains 5-10 miles		0.0086	0.0142
		(0.0153)	(0.0137)
Mean dep. var.	0.0363	0.0363	0.0363
Observations	5,402	5,402	5,402
Pseudo R^2	0.0046	0.0243	0.0406
FE (MSA)	No	No	Yes

Note: This table shows logit estimates of divestiture selection; employment is in hundreds, distance measures are in miles, standard errors are in parentheses, and stars denote statistical significance.

Table 8: Regression of exit (Exit within 1 year) on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	-0.00431	-0.00248	0.03391**	0.03609**	0.02976*	0.03088*	0.05459***
	(0.01575)	(0.01568)	(0.01500)	(0.01624)	(0.01523)	(0.01655)	(0.01896)
Supercenter <2mi		0.00093	0.00135**	0.00011	0.00144	0.00257	
		(0.00059)	(0.00059)	(0.00130)	(0.00095)	(0.00191)	
Supercenter 2-5mi		0.00069**	0.00113***	0.00128**	0.00156***	0.00200**	
		(0.00028)	(0.00029)	(0.00063)	(0.00045)	(0.00091)	
Supercenter 5-10mi		0.00008	0.00006	0.00079**	0.00047**	0.00148***	
		(0.00013)	(0.00015)	(0.00034)	(0.00023)	(0.00047)	
Club <2mi		-0.00682***	-0.00118	-0.00250	0.00190	0.00046	
		(0.00100)	(0.00100)	(0.00217)	(0.00157)	(0.00327)	
Club 2-5mi		-0.00224***	0.00288***	0.00232*	0.00096	-0.00018	
		(0.00061)	(0.00063)	(0.00124)	(0.00093)	(0.00176)	
Club 5-10mi		-0.00267***	0.00085**	0.00097	0.00023	-0.00051	
		(0.00036)	(0.00039)	(0.00082)	(0.00053)	(0.00111)	
Large <2mi		0.00154***	0.00170***	0.00498***	-0.00001	0.00378***	
		(0.00035)	(0.00035)	(0.00081)	(0.00045)	(0.00110)	
Large 2-5mi		-0.00015	-0.00031**	-0.00097***	-0.00039**	-0.00092**	
		(0.00013)	(0.00013)	(0.00028)	(0.00016)	(0.00036)	
Large 5-10mi		0.00029***	0.00025***	0.00016	0.00005	0.00011	
		(0.00005)	(0.00006)	(0.00012)	(0.00007)	(0.00015)	
Chains <2mi		0.00105***	0.00142***	0.00202***	0.00181***	0.00173*	
		(0.00032)	(0.00031)	(0.00074)	(0.00042)	(0.00098)	
Chains 2-5mi		-0.00022	-0.00029**	-0.00018	-0.00005	-0.00015	
		(0.00014)	(0.00014)	(0.00030)	(0.00018)	(0.00040)	
Chains 5-10mi		-0.00023**	-0.00054***	-0.00052**	-0.00024*	-0.00040	
		(0.00010)	(0.00011)	(0.00023)	(0.00014)	(0.00028)	
Observations	465,715	465,715	465,715	103,623	137,516	38,150	465,715
R^2	0.00000	0.00080	0.01902	0.04026	0.01457	0.03040	0.15294
Mean Dep Var	0.09690	0.09690	0.09690	0.08229	0.09173	0.08257	0.09473
Fixed effects	None	None	MSA + Year	MSA + Year	MSA + Year	MSA + Year	MSA + Year

Note: This table shows regression estimates for exit within 1 year across alternative samples and IPW weighting; standard
as listed.

Table 9: Regression of exit (Exit within 3 years) on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	0.01304	0.01466	0.04619**	0.04988***	0.04454**	0.04588**	0.06938***
	(0.01879)	(0.01878)	(0.01806)	(0.01929)	(0.01816)	(0.01947)	(0.02312)
Supercenter <2mi		0.00095	0.00148**	0.00034	0.00167*	0.00339*	
		(0.00060)	(0.00060)	(0.00131)	(0.00097)	(0.00194)	
Supercenter 2-5mi		0.00077***	0.00126***	0.00148**	0.00160***	0.00202**	
		(0.00029)	(0.00029)	(0.00064)	(0.00046)	(0.00092)	
Supercenter 5-10mi		0.00018	0.00016	0.00076**	0.00058**	0.00139***	
		(0.00013)	(0.00016)	(0.00035)	(0.00023)	(0.00047)	
Club <2mi		-0.00603***	-0.00069	-0.00235	0.00253	0.00102	
		(0.00102)	(0.00103)	(0.00221)	(0.00162)	(0.00335)	
Club 2-5mi		-0.00247***	0.00251***	0.00220*	0.00064	0.00040	
		(0.00062)	(0.00064)	(0.00126)	(0.00095)	(0.00179)	
Club 5-10mi		-0.00291***	0.00044	0.00068	-0.00002	-0.00026	
		(0.00036)	(0.00040)	(0.00083)	(0.00055)	(0.00113)	
Large <2mi		0.00157***	0.00162***	0.00463***	-0.00018	0.00338***	
		(0.00036)	(0.00036)	(0.00082)	(0.00046)	(0.00111)	
Large 2-5mi		-0.00005	-0.00024*	-0.00079***	-0.00037**	-0.00080**	
		(0.00013)	(0.00013)	(0.00028)	(0.00016)	(0.00036)	
Large 5-10mi		0.00034***	0.00025***	0.00018	0.00002	0.00015	
		(0.00005)	(0.00006)	(0.00012)	(0.00007)	(0.00015)	
Chains <2mi		0.00104***	0.00149***	0.00226***	0.00179***	0.00213**	
		(0.00032)	(0.00032)	(0.00074)	(0.00042)	(0.00099)	
Chains 2-5mi		-0.00038***	-0.00044***	-0.00035	-0.00012	-0.00033	
		(0.00014)	(0.00014)	(0.00031)	(0.00018)	(0.00040)	
Chains 5-10mi		-0.00028***	-0.00048***	-0.00050**	-0.00014	-0.00043	
		(0.00010)	(0.00011)	(0.00023)	(0.00014)	(0.00028)	
Observations	436,032	436,032	436,032	97,900	128,799	36,109	436,032
R^2	0.00000	0.00085	0.01748	0.03996	0.01345	0.02998	0.16421
Mean Dep Var	0.09508	0.09508	0.09508	0.07974	0.08959	0.07937	0.10107
Fixed effects	None	None	MSA + Year	MSA + Year	MSA + Year	MSA + Year	MSA + Year

Note: This table shows regression estimates for exit within 3 years across alternative samples and IPW weighting; standard
as listed.

Table 10: Regression of exit (Exit within 5 years) on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	-0.00981	-0.00716	0.00560	0.01809	0.00174	0.00408	0.04206
	(0.02463)	(0.02463)	(0.02427)	(0.02534)	(0.02420)	(0.02575)	(0.02892)
Supercenter <2mi		0.00153**	0.00228***	0.00069	0.00213**	0.00330	
		(0.00064)	(0.00064)	(0.00138)	(0.00105)	(0.00205)	
Supercenter 2-5mi		0.00100***	0.00156***	0.00181***	0.00160***	0.00209**	
		(0.00031)	(0.00031)	(0.00067)	(0.00049)	(0.00097)	
Supercenter 5-10mi		0.00044***	0.00034**	0.00069*	0.00075***	0.00114**	
		(0.00014)	(0.00017)	(0.00037)	(0.00025)	(0.00050)	
Club <2mi		-0.00482***	0.00047	-0.00249	0.00351**	0.00132	
		(0.00109)	(0.00111)	(0.00230)	(0.00174)	(0.00350)	
Club 2-5mi		-0.00285***	0.00232***	0.00241*	0.00059	0.00207	
		(0.00066)	(0.00069)	(0.00132)	(0.00101)	(0.00190)	
Club 5-10mi		-0.00308***	0.00038	0.00093	-0.00024	0.00054	
		(0.00039)	(0.00043)	(0.00088)	(0.00059)	(0.00120)	
Large <2mi		0.00185***	0.00180***	0.00432***	0.00001	0.00263**	
		(0.00038)	(0.00038)	(0.00085)	(0.00049)	(0.00115)	
Large 2-5mi		0.00002	-0.00019	-0.00079***	-0.00033*	-0.00069*	
		(0.00014)	(0.00014)	(0.00029)	(0.00018)	(0.00038)	
Large 5-10mi		0.00037***	0.00024***	0.00019	0.00000	0.00020	
		(0.00006)	(0.00006)	(0.00013)	(0.00008)	(0.00016)	
Chains <2mi		0.00092***	0.00148***	0.00250***	0.00170***	0.00265**	
		(0.00034)	(0.00034)	(0.00078)	(0.00043)	(0.00104)	
Chains 2-5mi		-0.00050***	-0.00054***	-0.00039	-0.00020	-0.00057	
		(0.00015)	(0.00015)	(0.00032)	(0.00019)	(0.00042)	
Chains 5-10mi		-0.00034***	-0.00046***	-0.00047**	-0.00008	-0.00039	
		(0.00010)	(0.00012)	(0.00024)	(0.00015)	(0.00030)	
Observations	378,103	378,103	378,103	86,098	111,941	31,903	378,103
R^2	0.00000	0.00102	0.01760	0.04096	0.01238	0.03055	0.08576
Mean Dep Var	0.09676	0.09676	0.09676	0.07953	0.09129	0.07955	0.09376
Fixed effects	None	None	MSA + Year	MSA + Year	MSA + Year	MSA + Year	MSA + Year

Note: This table shows regression estimates for exit within 5 years across alternative samples and IPW weighting; standard
as listed.

Table 11: Regression of exit (Ownership change within 1 year) on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	0.03325**	0.03505**	0.02048	-0.01464	0.01379	-0.03601**	0.00818
	(0.01484)	(0.01477)	(0.01417)	(0.01447)	(0.01459)	(0.01596)	(0.01060)
Supercenter <2mi		0.00289***	0.00291***	0.00158*	0.00275***	0.00096	
		(0.00038)	(0.00037)	(0.00092)	(0.00071)	(0.00138)	
Supercenter 2-5mi		0.00094***	0.00029	0.00055	0.00001	0.00005	
		(0.00018)	(0.00019)	(0.00043)	(0.00033)	(0.00061)	
Supercenter 5-10mi		0.00005	-0.00024**	-0.00014	-0.00043***	-0.00038	
		(0.00009)	(0.00010)	(0.00023)	(0.00017)	(0.00031)	
Club <2mi		-0.00331***	-0.00292***	-0.00720***	-0.00480***	-0.00944***	
		(0.00061)	(0.00062)	(0.00152)	(0.00110)	(0.00232)	
Club 2-5mi		-0.00149***	-0.00159***	-0.00598***	-0.00150**	-0.00575***	
		(0.00039)	(0.00041)	(0.00090)	(0.00068)	(0.00134)	
Club 5-10mi		-0.00071***	-0.00058**	-0.00257***	-0.00086**	-0.00370***	
		(0.00022)	(0.00024)	(0.00061)	(0.00037)	(0.00085)	
Large <2mi		0.00063***	0.00053**	0.00085	-0.00002	-0.00059	
		(0.00021)	(0.00021)	(0.00055)	(0.00029)	(0.00076)	
Large 2-5mi		-0.00009	0.00022***	0.00030	0.00034***	0.00074***	
		(0.00008)	(0.00008)	(0.00020)	(0.00012)	(0.00027)	
Large 5-10mi		-0.00002	0.00021***	0.00056***	0.00018***	0.00058***	
		(0.00003)	(0.00004)	(0.00008)	(0.00005)	(0.00011)	
Chains <2mi		-0.00100***	-0.00176***	0.00037	-0.00125***	0.00112	
		(0.00020)	(0.00020)	(0.00054)	(0.00027)	(0.00074)	
Chains 2-5mi		0.00024***	0.00011	0.00025	-0.00005	-0.00007	
		(0.00009)	(0.00009)	(0.00022)	(0.00012)	(0.00031)	
Chains 5-10mi		0.00022***	-0.00031***	-0.00069***	-0.00018*	-0.00043*	
		(0.00006)	(0.00007)	(0.00017)	(0.00010)	(0.00023)	
Observations	465,715	465,715	465,715	103,623	137,516	38,150	465,715
R^2	0.00003	0.00063	0.02834	0.15981	0.04846	0.24501	0.24279
Mean Dep Var	0.03556	0.03556	0.03556	0.07682	0.04794	0.10904	0.05072
Fixed effects	None	None	MSA + Year	MSA + Year	MSA + Year	MSA + Year	MSA + Year

Note: This table shows regression estimates for ownership change within 1 year across alternative samples and IPW weig
fixed effects are as listed.

Table 12: Regression of exit (Ownership change within 3 years) on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	0.03287**	0.03470**	0.02127	-0.01504	0.01425	-0.03647**	0.00907
	(0.01484)	(0.01476)	(0.01419)	(0.01444)	(0.01460)	(0.01593)	(0.01061)
Supercenter <2mi		0.00299***	0.00301***	0.00145	0.00283***	0.00044	
		(0.00038)	(0.00038)	(0.00094)	(0.00072)	(0.00139)	
Supercenter 2-5mi		0.00097***	0.00031	0.00041	0.00008	0.00002	
		(0.00018)	(0.00019)	(0.00044)	(0.00034)	(0.00061)	
Supercenter 5-10mi		0.00004	-0.00027***	-0.00014	-0.00048***	-0.00035	
		(0.00009)	(0.00010)	(0.00024)	(0.00017)	(0.00031)	
Club <2mi		-0.00336***	-0.00289***	-0.00732***	-0.00481***	-0.00947***	
		(0.00062)	(0.00062)	(0.00153)	(0.00111)	(0.00234)	
Club 2-5mi		-0.00143***	-0.00149***	-0.00568***	-0.00140**	-0.00571***	
		(0.00039)	(0.00041)	(0.00091)	(0.00068)	(0.00135)	
Club 5-10mi		-0.00055**	-0.00038	-0.00210***	-0.00077**	-0.00358***	
		(0.00022)	(0.00024)	(0.00062)	(0.00037)	(0.00085)	
Large <2mi		0.00066***	0.00056***	0.00105*	-0.00005	-0.00041	
		(0.00021)	(0.00021)	(0.00056)	(0.00029)	(0.00077)	
Large 2-5mi		-0.00008	0.00023***	0.00022	0.00037***	0.00069**	
		(0.00008)	(0.00008)	(0.00020)	(0.00012)	(0.00028)	
Large 5-10mi		-0.00005	0.00019***	0.00056***	0.00018***	0.00060***	
		(0.00003)	(0.00004)	(0.00009)	(0.00005)	(0.00011)	
Chains <2mi		-0.00101***	-0.00178***	0.00030	-0.00122***	0.00108	
		(0.00020)	(0.00020)	(0.00055)	(0.00027)	(0.00075)	
Chains 2-5mi		0.00025***	0.00012	0.00033	-0.00006	-0.00004	
		(0.00009)	(0.00009)	(0.00023)	(0.00012)	(0.00031)	
Chains 5-10mi		0.00024***	-0.00031***	-0.00073***	-0.00019*	-0.00047**	
		(0.00006)	(0.00007)	(0.00018)	(0.00010)	(0.00023)	
Observations	465,715	465,715	465,715	103,623	137,516	38,150	465,715
R^2	0.00003	0.00066	0.02904	0.15903	0.04915	0.24481	0.24232
Mean Dep Var	0.03594	0.03594	0.03594	0.07827	0.04837	0.11056	0.05087
Fixed effects	None	None	MSA + Year	MSA + Year	MSA + Year	MSA + Year	MSA + Year

Note: This table shows regression estimates for ownership change within 3 years across alternative samples and IPW weig
fixed effects are as listed.

Table 13: Regression of exit (Ownership change within 5 years) on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	0.01091	0.01210	0.02356**	0.03612***	0.02954***	0.05487***	0.00477
	(0.01070)	(0.01068)	(0.01032)	(0.01191)	(0.01046)	(0.01259)	(0.01077)
Supercenter <2mi		0.00177***	0.00208***	0.00068	0.00210***	-0.00044	
		(0.00032)	(0.00032)	(0.00088)	(0.00058)	(0.00132)	
Supercenter 2-5mi		0.00058***	0.00023	0.00018	0.00005	-0.00046	
		(0.00015)	(0.00016)	(0.00041)	(0.00027)	(0.00058)	
Supercenter 5-10mi		-0.00010	-0.00023***	-0.00047**	-0.00035***	-0.00086***	
		(0.00007)	(0.00008)	(0.00022)	(0.00013)	(0.00030)	
Club <2mi		-0.00363***	-0.00231***	-0.00607***	-0.00262***	-0.00601***	
		(0.00052)	(0.00052)	(0.00142)	(0.00090)	(0.00216)	
Club 2-5mi		-0.00190***	-0.00118***	-0.00380***	-0.00038	-0.00219*	
		(0.00033)	(0.00035)	(0.00085)	(0.00056)	(0.00128)	
Club 5-10mi		-0.00107***	-0.00026	-0.00158***	0.00009	-0.00157*	
		(0.00019)	(0.00021)	(0.00058)	(0.00030)	(0.00081)	
Large <2mi		0.00052***	0.00055***	0.00092*	0.00002	-0.00014	
		(0.00018)	(0.00018)	(0.00054)	(0.00024)	(0.00076)	
Large 2-5mi		0.00005	0.00020***	0.00032*	0.00026***	0.00071***	
		(0.00007)	(0.00007)	(0.00019)	(0.00010)	(0.00027)	
Large 5-10mi		0.00002	0.00017***	0.00038***	0.00013***	0.00051***	
		(0.00003)	(0.00003)	(0.00008)	(0.00004)	(0.00011)	
Chains <2mi		-0.00091***	-0.00145***	0.00029	-0.00098***	0.00079	
		(0.00017)	(0.00017)	(0.00053)	(0.00023)	(0.00072)	
Chains 2-5mi		0.00015**	0.00006	0.00004	-0.00005	-0.00025	
		(0.00008)	(0.00008)	(0.00021)	(0.00010)	(0.00030)	
Chains 5-10mi		0.00019***	-0.00025***	-0.00016	-0.00019**	-0.00027	
		(0.00006)	(0.00006)	(0.00017)	(0.00008)	(0.00022)	
Observations	465,715	465,715	465,715	103,623	137,516	38,150	465,715
R^2	0.00000	0.00051	0.02432	0.11135	0.03562	0.16278	0.26460
Mean Dep Var	0.02878	0.02878	0.02878	0.05990	0.03621	0.08042	0.03326
Fixed effects	None	None	MSA + Year	MSA + Year	MSA + Year	MSA + Year	MSA + Year

Note: This table shows regression estimates for ownership change within 5 years across alternative samples and IPW weig
fixed effects are as listed.

Table 14: Regression of survival duration on remedy divestiture indicator

Variable	Full sample			Remedy Firms	Remedy Markets	Remedy Firms + Markets	IPW weighted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remedy Divestiture	-2.655***	-2.701***	-3.053***	-3.543***	-2.986***	-3.472***	-2.646***
	(0.255)	(0.289)	(0.235)	(0.265)	(0.239)	(0.257)	(0.350)
Employment (avg, 100s)		0.595***	0.618***	0.365***	0.716***	0.192**	
		(0.092)	(0.096)	(0.121)	(0.103)	(0.092)	
Supercenter <2mi		0.018	-0.045	0.124	-0.112**	-0.027	
		(0.025)	(0.028)	(0.098)	(0.049)	(0.150)	
Supercenter 2-5mi		0.017	-0.031*	0.015	-0.065**	-0.046	
		(0.012)	(0.017)	(0.040)	(0.027)	(0.058)	
Supercenter 5-10mi		-0.002	-0.007	-0.007	-0.024*	-0.018	
		(0.014)	(0.010)	(0.013)	(0.013)	(0.016)	
Club <2mi		0.365***	0.460***	0.403***	0.356***	0.286	
		(0.062)	(0.057)	(0.133)	(0.076)	(0.229)	
Club 2-5mi		0.223***	0.315***	0.247***	0.272***	0.182**	
		(0.055)	(0.045)	(0.074)	(0.070)	(0.076)	
Club 5-10mi		0.187***	0.280***	0.257***	0.233***	0.267***	
		(0.054)	(0.040)	(0.053)	(0.062)	(0.081)	
Large <2mi		-0.059**	-0.092***	-0.168***	-0.022	-0.109	
		(0.024)	(0.029)	(0.053)	(0.018)	(0.075)	
Large 2-5mi		0.014***	0.006	0.031**	0.020***	0.053***	
		(0.004)	(0.008)	(0.015)	(0.007)	(0.012)	
Large 5-10mi		-0.016***	-0.028***	-0.021*	-0.019***	-0.019	
		(0.005)	(0.004)	(0.012)	(0.005)	(0.015)	
Chains <2mi		0.013	0.018	-0.045	-0.018	-0.044	
		(0.018)	(0.016)	(0.042)	(0.012)	(0.055)	
Chains 2-5mi		-0.010**	0.000	0.001	-0.011**	-0.017	
		(0.005)	(0.007)	(0.014)	(0.005)	(0.012)	
Chains 5-10mi		0.005	0.026**	0.011	0.024**	0.017	
		(0.014)	(0.011)	(0.018)	(0.009)	(0.020)	
Observations	84,095	84,095	84,095	16,559	24,015	5,676	84,095
R^2	0.000	0.032	0.061	0.087	0.069	0.080	0.165
Mean Dep Var	5.448	5.448	5.448	6.112	5.642	6.515	4.061

Note: This table shows regression estimates for survival duration (years) across alternative samples and IPW weighting; s
effects are as listed.