Technical Appendices

Supporting Data, Maps, and Technical Analyses for

Broadband Competition and Pricing Strategies in California's Urban Markets

The Public Advocates Office

California Public Utilities Commission

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APPENDIX A: Broadband Providers' Footprint and Sample Selection by Market

Table A1: Four Big Providers' Footprints in Each of the Four Markets (excluding business-only locations)

Market	Provider	Count of Census Block	Count of Location
Los Angeles	AT&T	23,787	564,377
Los Angeles	Cox	423	9,908
Los Angeles	Charter	23,168	621,237
Oakland	AT&T	3,812	89,842
Oakland	Comcast	3,816	91,680
San Diego	AT&T	9,494	267,193
San Diego	Cox	5,429	135,144
San Diego	Charter	3,980	148,396
San Mateo	AT&T	882	22,110
San Mateo	Comcast	889	23,333

Table A2: Number of Sample Locations Selected per Provider for Each Market

AT&T Sample	Count of Census Block from Sample	Count of Sample Locations	Count of AT&T Fiber Locations from Sample
Los Angeles	2,390	3,171	1,596
Oakland	1,684	3,377	1,625
San Diego	2,059	3,151	1,560
San Mateo	471	1,957	1,185
TOTAL	**6,604**	**11,656**	**5,966**

Comcast Sample	Count of Census Block from Sample	Count of Sample Locations
Oakland	983	1,559
San Mateo	371	1,355
TOTAL	**1,354**	**2,914**

Charter Sample	Count of Census Block from Sample	Count of Sample Locations
Los Angeles	1,535	1,999
San Diego	935	1,971
TOTAL	**2,470**	**3,970**

Cox Sample	Count of Census Block from Sample	Count of Sample Locations
San Diego	814	1,144

APPENDIX B: Provider-Specific Market Analysis

A. AT&T

Tables B1 summarizes AT&T's broadband prices, competitive conditions, and pricing patterns in San Mateo and Oakland.

Table B1: AT&T's Broadband Prices in San Mateo and Oakland

AT&T	AT&T – San Mateo	AT&T – Oakland
Non-Promotional Prices	100 Mbps ($55), 300 Mbps ($65), 500 Mbps ($75), 1 Gbps ($90), 2 Gbps ($155), and 5 Gbps ($255)	
Promotional Prices (Core Pricing Sets)[1]	**Pricing Set A – $55 for 1 Gbps:** • $45-$55-$65-**$55-**$125-$155 • 249 locations (21% of 1,185 sample fiber locations) **Pricing Set B – $65 for 1 Gbps:** • $45-$55-$65-**$65-**$125-$155 • 913 locations (77% of 1,185 sample fiber locations)	**Pricing Set A – $53 for 1 Gbps:** • $45-$55-$65-**$53**-$125-$155 • 540 locations (33% of 1,625 sample fiber locations) **Pricing Set B – $55 for 1 Gbps:** • $45-$55-$65-**$55**-$125-$155 • 278 locations (17% of 1,625 sample fiber locations) **Pricing Set C – $65 for 1 Gbps:** • $45-$55-$65-**$65**-$125-$155 • 766 locations (47% of 1,625 sample fiber locations)
AT&T as Sole Gigabit Provider	0%	0%
Competitive Overlap[2]	**$55 for 1 Gbps:** • Comcast (cable): 248 locations (99.6% of 249) • Astound (cable): 184 locations (74% of 249) **$65 for 1 Gbps:**	**$53 for 1 Gbps:** • Sonic (fiber): 539 locations (99.8% of 540). • Comcast (cable): 538 locations (99.6% of 540). **$55 for 1 Gbps:**

[1] Each pricing set represents a consistent combination of promotional prices offered across speed tiers at a given location.

[2] Competitors with less than 10% geographic overlap in the sample are excluded from this table because such limited presence does not represent meaningful competitive pressure or materially influence promotional pricing behavior.

AT&T	AT&T – San Mateo	AT&T – Oakland
	• Comcast (cable): 912 locations (99.9% of 913) • Astound (cable): 569 locations (62% of 913)	• Comcast (cable): 276 locations (99.3% of 278). • Sonic (fiber): 144 locations (52% of 278). **$65 for 1 Gbps:** • Comcast (cable): 766 locations (100% of 766). • Sonic (fiber): 147 locations (19% of 766).
Share of Sample Locations that are Low-Income	**$55 for 1 Gbps:** • 120 locations (48% of 249). **$65 for 1 Gbps:** • 280 locations (31% of 913).	**$53 for 1 Gbps:** • 374 locations (69% of 540). **$55 for 1 Gbps:** • 190 locations (68% of 278). **$65 for 1 Gbps:** • 497 locations (65% of 766).

Note: In San Mateo and Oakland, AT&T's promotional pricing varies at a granular, neighborhood level. AT&T lowers its 1 Gbps price in areas where it faces greater competitive pressure from lower-priced cable or fiber providers (Astound in San Mateo[3] and Sonic in Oakland) and charges higher prices where that pressure diminishes. These pricing differences align with local competitive conditions rather than neighborhood income levels as discussed further in Section VI. This pattern indicates that AT&T actively adjusts prices in response to local competition within the same market.

Table B2 summarizes AT&T's broadband prices, competitive conditions, and pricing patterns in Los Angeles and San Diego.

[3] AT&T's 1 Gbps pricing reflects both the relative and absolute presence of Astound. In the $55 areas, Astound overlaps 74% of locations, but only 184 locations total, so competitive pressure is concentrated in a small cluster, prompting lower prices. In the $65 areas, Astound overlaps a smaller percentage (62%) but a much larger number of locations (569), spread across a broader market, resulting in higher prices because competition is less concentrated and customer churn risk per location is lower.

Table B2: AT&T's Broadband Prices in Los Angeles and San Diego

AT&T	AT&T – Los Angeles	AT&T – San Diego
Non-Promotional Prices	100 Mbps ($55), 300 Mbps ($65), 500 Mbps ($75), 1 Gbps ($90), 2 Gbps ($155), and 5 Gbps ($255)	
Promotional Prices (Core Pricing Set)	**Pricing Set – $65 for 1 Gbps:** • $45-$55-$65-**$65**-$125-$155 • 1,574 locations (99% of 1,596 sample fiber locations)	**Pricing Set – $65 for 1 Gbps:** • $45-$55-$65-**$65**-$125-$155 • 1,543 locations (99% of 1,560 sample fiber locations)
AT&T as Sole Gigabit Provider	One location.	88 locations (6% of 1,543)
Competitive Overlap[4]	• Charter (cable): 1,573 locations (99.9% of 1,574) • GeoLinks (fixed wireless): 432 locations (27% of 1,574) • Frontier (fiber): 261 locations (17% of 1,574)	• Either Charter or Cox (cable): 1,474 locations (96% of 1,543)
Share of Sample Locations that are Low-Income	• 1,135 locations (72% of 1,574)	• 1,045 locations (68% of 1,543)

Note: In contrast to the Bay Area, AT&T applies a uniform promotional price across nearly all locations in Los Angeles and San Diego. This pricing pattern reflects the more limited and geographically uniform competitive environment in these markets, where AT&T primarily competes with incumbent cable providers (Charter and Cox) and faces limited overlap from lower-priced fiber competitors. The absence of neighborhood-level price variation suggests limited competitive pressure and fewer incentives for granular pricing adjustments.

[4] Competitors with less than 10% geographic overlap in the sample are excluded from this table because such limited presence does not represent meaningful competitive pressure or materially influence promotional pricing behavior.

B. Comcast

Tables B3 summarizes Comcast's broadband prices, competitive conditions, and pricing patterns in San Mateo and Oakland.

Table B3: Comcast's Broadband Prices in San Mateo and Oakland

Comcast	Comcast – San Mateo	Comcast – Oakland
Non-Promotional Prices	300 Mbps ($80), 500 Mbps ($95), 1 Gbps ($110), and 1.2 Gbps or 2 Gbps ($140)	
Promotional Prices (Pricing Set)	**Pricing Set A – Lower-Priced Set:** • $40-$45-$50-$70 • 591 locations, 44% of 1,355 sample locations **Pricing Set B – Higher-Priced Set:** • $40-$55-$70-$100 • 764 locations, 56% of 1,355 sample locations	**Pricing Set A – Lower-Priced Set:** • $40-$45-$50-$70 • 983 locations, 63% of 1,559 sample locations **Pricing Set B – Higher-Priced Set:** • $40-$55-$70-$100 • 576 locations, 37% of 1,559 sample locations
Comcast as sole gigabit provider	**Lower-Priced Set:** • 280 locations (47% of 591) **Higher-Priced Set:** • 46 locations (6% of 764)	**Lower-Priced Set:** • 213 locations (22% of 983) **Higher-Priced Set:** • 183 location (32% of 576)
Competitive Overlap[5]	**Lower-Priced Set:** • Astound (cable): 216 locations (37% of 591) • AT&T (fiber): 213 locations (36% of 591) **Higher-Priced Set:** • Astound (cable): 597 locations (78% of 764) • AT&T (fiber): 447 locations (59% of 764)	**Lower-Priced Set:** • AT&T (fiber): 486 locations (49% of 983) • Sonic (fiber): 457 locations (46% of 983) **Higher-Priced Set:** • Sonic (fiber): 263 locations (46% of 576) • AT&T(fiber): 229 locations (39% of 576)
Share of Sample Locations that are Low-Income	**Lower-Priced Set:** • 283 locations (48% of 591) **Higher-Priced Set:** • 399 locations (52% of 764)	**Lower-Priced Set:** • 661 locations (67% of 983) **Higher-Priced Set:** • 407 locations (71% of 576)

[5] Competitors with less than 10% geographic overlap in the sample are excluded from this table because such limited presence does not represent meaningful competitive pressure or materially influence promotional pricing behavior.

C. Charter

Table B4 summarizes Charter's broadband prices, competitive conditions, and pricing patterns in Los Angeles and San Diego.

Table B4: Charter's Broadband Prices in Los Angeles and San Diego

Charter	Charter – Los Angeles	Charter – San Diego
Non-Promotional Prices	100 Mbps ($50), 500 Mbps ($80), and 1 Gbps ($100)	
Promotional Prices (Core Pricing Set)	**Pricing Set A:** • $30-$50-$40 • 434 locations, 22% of 1,999 sample locations. **Pricing Set B:** • $30-$50-$70 • 556 locations, 28% of 1,999 sample locations. **Pricing Set C:** • $30-$40-$70 • 886 locations, 44% of 1,999 sample locations.	**Pricing Set A:** • $30-$50-$40 • 599 locations, 30% of 1,971 sample locations. **Pricing Set B:** • $30-$50-$70 • 1,324 locations, 67% of 1,971 sample locations.
Charter as Sole Gigabit Provider	**Pricing Set A – $30-$50-$40:** • 70 locations (16% of 434) **Pricing Set B – $30-$50-$70:** • 412 locations (**74%** of 556) **Pricing Set C – $30-$40-$70:** • 270 locations (30% of 886)	**Pricing Set A – $30-$50-$40:** • 138 locations (23% of 599) **Pricing Set B – $30-$50-$70:** • 605 locations (46% of 1,324)
Competitive Overlap[6]	**Pricing Set A – $30-$50-$40:** • Frontier (fiber): 347 locations (80% of 434) • Ting (fiber): 243 locations (56% of 434) • AT&T (fiber):	**Pricing Set A – $30-$50-$40:** • AT&T (fiber): 458 locations (76% of 599) **Pricing Set B – $30-$50-$70:** • AT&T (fiber):

[6] Competitors with less than 10% geographic overlap in the sample are excluded from this table because such limited presence does not represent meaningful competitive pressure or materially influence promotional pricing behavior.

Charter	Charter – Los Angeles	Charter – San Diego
	53 locations (12% of 434) **Pricing Set B – $30-$50-$70:** • Frontier (fiber): 55 locations (10% of 556) • AT&T (fiber): • 48 locations (9% of 556) **Pricing Set C – $30-$40-$70:** • AT&T (fiber): 575 locations (65% of 886) • Verizon (fixed wireless): 95 locations (11% of 886)	540 locations (41% of 1,324) • Cox (cable): 461 locations (35% of 1,324)
Share of Sample Locations that are Low-Income (%)	**Pricing Set A – $30-$50-$40:** • 176 locations (41% of 434) **Pricing Set B – $30-$50-$70:** • 450 locations (81% of 556) **Pricing Set C – $30-$40-$70:** • 685 locations (77% of 886)	**Pricing Set A – $30-$50-$40:** • 442 locations (74% of 599) **Pricing Set B – $30-$50-$70:** • 664 locations (50% of 1,324)

Note:

A small promotional pricing set ($30-$40-$40) appears in 71 Los Angeles locations (4% of the sample), concentrated in two adjacent neighborhoods: one predominantly low-income and the other predominantly moderate-income.[7] These likely reflect localized price testing rather than income-based differentiation. While limited in scope, the presence of this pricing set highlights the need for greater transparency in promotional pricing practices.

Charter's pricing reflects the intensity and structure of local competition rather than income levels. Charter offers promotional discounts ranging from $20 to $60, with larger reductions applied to higher speed tiers. In Los Angeles, although AT&T, Frontier, and Ting collectively cover less than half of the market's gigabit locations, the fiber competition from multiple providers creates pricing pressure across both 500 Mbps and 1

[7] See Appendix D, map for Los Angeles_Charter, $40-$40 (500 Mbps, 1 Gbps).

Gbps tiers. As a result, Charter selectively reduces prices for either 500 Mbps tier or 1 Gbps tier in areas where overlapping fiber networks increase churn risk. This tier-specific response likely reflects customer perceptions that 500 Mbps and 1 Gbps services are close substitutes in highly competitive areas. By contrast, in locations where Charter holds substantial sole-gigabit coverage, it maintains the highest promotional pricing (Pricing Set B – $30-$50-$70).

In San Diego, fiber competition is limited, and fewer alternative providers are present. Charter's pricing response is therefore concentrated on the 1 Gbps tier, while promotional prices for 500 Mbps and 100 Mbps services remain largely stable. Even moderate increases in competitive overlap (AT&T's 76% vs. 41% overlapping) are sufficient to influence 1 Gbps pricing, but do not generate enough pressure to affect lower-speed tiers. Where overlapping providers offer higher-priced alternatives, such as Cox, no downward pricing pressure is observed.

Overall, across both markets, Charter's pricing patterns closely follow the extent of overlapping fiber networks. Its 1 Gbps tier is the most sensitive to competition pressure, explaining why in Los Angeles, Charter exhibits tier-specific adjustments, while in San Diego, Charter's pricing responses are limited to the 1 Gbps service tier.

D. Cox

Table B5 summarizes Cox's broadband prices, competitive conditions, and pricing patterns in San Diego.

Table B5: Cox's Broadband Prices in San Diego

Cox	Cox – San Diego
Non-Promotional Prices	300 Mbps ($70), 500 Mbps ($105), 1 Gbps ($135), and 2 Gbps ($165)
Promotional Prices (Core Pricing Set)	**Pricing Set A – Lower-Priced Set:** • $50-$60-$70-$110 • 463 locations, 40% of 1,144 sample locations. **Pricing Set B – Higher-Priced Set:** • $50-$70-$90-$140 • 644 locations, 56% of 1,144 sample locations.
Cox as Sole Gigabit Provider	**Pricing Set A – Lower-Priced Set:** • 44 locations (10% of 463) **Pricing Set B – Higher-Priced Set:** • 535 locations (**83%** of 644)
Competitive Overlap[8]	**Pricing Set A – Lower-Priced Set:** • AT&T (fiber): 401 locations (87% of 463) • Charter (cable): 113 locations (24% of 463) **Pricing Set B – Higher-Priced Set:** • Charter (cable): 89 locations (14% of 644) • AT&T (fiber): 9 locations (1% of 644)
Share of Sample Locations that are Low-Income	**Pricing Set A – Lower-Priced Set:** • 263 locations (57% of 463) **Pricing Set B – Higher-Priced Set:** • 455 locations (71% of 644)

[8] Competitors with less than 10% geographic overlap in the sample are excluded from this table because such limited presence does not represent meaningful competitive pressure or materially influence promotional pricing behavior.

APPENDIX C: Examples of Broadband Providers' Broadband Consumer Labels and Promotional Prices

Appendix C is provided as a separate PDF and contains examples of FCC broadband consumer labels and promotional pricing offers collected during the study period. These examples illustrate how promotional prices and disclosures vary across providers and locations.

Appendix C can be found here: Examples of Broadband Providers' Broadband Consumer Labels and Promotional Prices.

APPENDIX D: Geographic Patterns of Promotional Pricing, Competition, and Income Level

APPENDIX D.1: Maps of Promotional Price Distribution by Provider and Market

Appendix D.1 presents maps showing the geographic distribution of promotional broadband prices by providers across each study market. These maps illustrate how promotional pricing varies at the neighborhood and address level and highlight pricing patterns associated with local market conditions.

Appendix D.1 can be found here: Maps of Promotional Prices Distribution by Provider and Market.

APPENDIX D.2: Maps of Promotional Prices by Provider, Market, and Income Level

Appendix D.2 presents maps showing neighborhood income categories across the study markets, based on census block group median household income. These maps provide geographic context for the analysis of promotional broadband pricing and support evaluation of whether pricing patterns vary systematically by income after accounting for competitive conditions.

Appendix D.2 can be found here: Maps of Promotional Prices Distribution by Provider, Market, and Income Level.

APPENDIX E: Regression Results

A. AT&T

a. 1 Gbps regression results

1 Gbps (Discounted Price)						
Regression Statistics						
Multiple R	0.355418683					
R Square	0.12632244					
Adjusted R Square	0.125532786					
Standard Error	4.499930092					
Observations	5697					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	16665.01655	3333.00331	205.74734	3.125E-202	
Residual	5692	115259.4188	20.24937083			
Total	5697	131924.4353				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	69.37047309	0.264353735	262.4153322	0	68.8522391	69.8887071
Number of Gbps Providers	-1.896898393	0.100170047	-18.9367825	1.324E-77	-2.0932698	-1.700527
Number of Sub-Gbps Provid	-0.998069168	0.054979836	-18.15336764	1.228E-71	-1.1058506	-0.8902878
Low-income	-0.21784464	0.151172245	-1.441035948	0.1496295	-0.5141998	0.07851053
Moderate-income	-0.165487684	0.142630996	-1.160250495	0.2459955	-0.4450988	0.11412339
Middle-income	0	0	65535	#NUM!	0	0

b. 500 Mbps regression results

500 Mbps (Discounted Price)						
Regression Statistics						
Multiple R	0.126520104					
R Square	0.016007337					
Adjusted R Square	0.01514016					
Standard Error	2.534845952					
Observations	5697					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	594.9702559	118.9940512	23.148994	4.3343E-23	
Residual	5692	36573.62725	6.425444001			
Total	5697	37168.59751				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	64.8885156	0.148912534	435.7491859	0	64.5965903	65.1804409
Number of Gbps Providers	-0.354841432	0.056426574	-6.288551784	3.443E-10	-0.465459	-0.2442239
Number of Sub-Gbps Provid	0.075113211	0.030970573	2.425309036	0.0153263	0.01439909	0.13582733
Low-income	0.613098375	0.085156513	7.199665127	6.818E-13	0.44615918	0.78003757
Moderate-income	0.212780897	0.08034516	2.648334979	0.0081113	0.05527378	0.37028801
Middle-income	0	0	65535	#NUM!	0	0

B. CHARTER

a. 1 Gbps regression results

1 Gbps (Discounted Price)						
Regression Statistics						
Multiple R	0.265507539					
R Square	0.070494253					
Adjusted R Square	0.069233424					
Standard Error	12.8510327					
Observations	3747					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	46868.5453	9373.70906	70.94886	3.978E-71	
Residual	3742	617987.713	165.1490414			
Total	3747	664856.258				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	72.17068267	0.75421832	95.68937915	0	70.691964	73.649402
Number of Gbps Providers	-3.596691823	0.30797668	-11.67845496	5.63E-31	-4.2005103	-2.992873
Number of Sub-Gbps Providers	-2.441143009	0.22797431	-10.70797415	2.24E-26	-2.888109	-1.994177
Low-income	-2.578793111	0.52425071	-4.919007365	9.07E-07	-3.6066381	-1.550948
Moderate-income	0	0	65535	#NUM!	0	0
Middle-income	-2.658441488	0.54876424	-4.844414623	#NUM!	-3.7343476	-1.582535

b. 500 Mbps regression results

500 Mbps (Discounted Price)						
Regression Statistics						
Multiple R	0.274145204					
R Square	0.075155593					
Adjusted R Square	0.073899746					
Standard Error	4.870651218					
Observations	3747					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	7213.90597	1442.781194	76.021498	4.22109E-76	
Residual	3742	88772.37639	23.72324329			
Total	3747	95986.28236				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	48.3115371	0.285855188	169.0070324	0	47.75108995	48.87198425
Number of Gbps Providers	-0.827498609	0.116725795	-7.089252292	1.60444E-12	-1.056350986	-0.598646232
Number of Sub-Gbps Providers	1.184453595	0.086404211	13.70828546	9.10221E-42	1.015049659	1.353857532
Low-income	-1.35028929	0.1986955	-6.795771875	1.24845E-11	-1.739851319	-0.960727262
Moderate-income	0	0	65535	#NUM!	0	0
Middle-income	-1.914606985	0.207986335	-9.205446044	#NUM!	-2.322384608	-1.506829363

C. COX

a. 1 Gbps regression results

1 Gbps (Discounted Price)						
Regression Statistics						
Multiple R	0.735138143					
R Square	0.54042809					
Adjusted R Square	0.537873376					
Standard Error	6.752216296					
Observations	1116					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	59565.00589	11913.00118	326.61679	3.879E-215	
Residual	1111	50653.18408	45.59242491			
Total	1116	110218.19				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	97.54360703	0.589682371	165.4172005	0	96.3865904	98.700624
Number of Gbps Providers	-12.1354578	0.340601334	-35.6295076	4.72E-186	-12.803752	-11.467163
Number of Sub-Gbps Providers	1.529758692	0.247464761	6.181723361	8.89E-10	1.04420771	2.0153097
Low-income	0.533557465	0.503250588	1.060222239	0.2892739	-0.4538713	1.5209862
Moderate-income	4.321091722	0.544059255	7.942318191	4.834E-15	3.25359222	5.3885912
Middle-income	0	0	65535	#NUM!	0	0

b. 500 Mbps regression results

500 Mbps (Discounted Price)						
Regression Statistics						
Multiple R	0.66707607					
R Square	0.444990484					
Adjusted R Square	0.442092159					
Standard Error	4.181597402					
Observations	1116					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	15575.74351	3115.148703	222.69187	1.253E-164	
Residual	1111	19426.67584	17.48575683			
Total	1116	35002.41935				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	73.71341083	0.365185913	201.8517371	0	72.996879	74.4299427
Number of Gbps Providers	-6.243212044	0.210931876	-29.59823882	1.97E-142	-6.6570818	-5.8293423
Number of Sub-Gbps Providers	0.781583943	0.153253088	5.099955582	3.992E-07	0.48088582	1.08228206
Low-income	-0.004006012	0.311659351	-0.012853815	0.9897467	-0.6155133	0.60750128
Moderate-income	2.432692338	0.336931856	7.220131591	9.614E-13	1.77159783	3.09378685
Middle-income	0	0	65535	#NUM!	0	0

D. Note on Comcast

Regression analysis is presented for AT&T, Charter, and Cox, whose promotional pricing varies primarily in response to local competitive conditions. Comcast is excluded from the regression analysis because its pricing strategy reflects large, market-wide discounts followed by secondary geographic variation that do not correspond to local competition intensity. As a result, regression models using gigabit provider or sub-gig provider counts are not well-suited to explain Comcast's within-market price variation.