

Demand for subscriptions to daily newspaper websites

[Our-Hometown, Inc.](#)

Data about online-only subscriptions at 13 different daily newspaper websites with paywalls is used to generate a demand-by-price curve that predicts the number of subscribers expected for any given price. The econometric principles described in the Wikipedia article, [Price Elasticity of Demand/Effect on Total Revenue](#) are used to calculate the price at which revenue can be maximized along with resulting subscription and revenue levels.

This article builds on prior work, [Theory of Subscription Pricing for Weekly Community Newspaper Websites](#), where the impact of two significantly different price points for online-only subscriptions at a single publisher is described.

The source of data was newspapers that reported online-only subscriptions and protected their HTML website in the article, [Paywall Brigade: The Newspapers That Now Charge For Online Access](#), and new data from [The Oil City \(PA\) Derrick](#), [The Moscow-Pullman \(ID\) Daily News](#) and [The Winchester \(VA\) Star](#).

Newspaper	Location	Print Circ	Date paywall started	Price/mo for online-only	Online-only subscribers	Revenues **	Subscribers ***
thederrick.com	Oil City, PA	28,000	Oct-09	\$10.00	1,185	\$5.08	4.23%
bendbulletin.com	Bend, Oregon	32,946	2005	\$8.00	1,200	\$3.50	3.64%
dnews.com	Moscow, Idaho	6,615	1999	\$7.00	255	\$3.24	3.85%
winchesterstar.com	Winchester, VA	20,218	Sep-09	\$3.08 *	1,628	\$2.98	8.05%
gazettenet.com	Northampton, MA	19,000	2004	\$7.75	580	\$2.84	3.05%
abqjournal.com	Albuquerque, NM	95,469	2001	\$12.75	1,750	\$2.80	1.83%
dailygazette.com	Schenectady, NY	44,000	2009	\$11.80	855	\$2.75	1.94%
messenger-inquirer.com	Owensboro, KY	25,014	2006	\$6.95	800	\$2.67	3.20%
arkansasonline.com	Little Rock, AR	185,792	2002	\$9.99	3,500	\$2.26	1.88%
themercury.com	Manhattan, KS	10,500	2009	\$12.89	150	\$2.21	1.43%
limaohio.com	Lima, Ohio	29,981	2009	\$4.95	1,010	\$2.00	3.37%
lmtribune.com	Lewiston, Idaho	23,421	1999	\$8.00	460	\$1.89	1.96%
daily-journal.com	Kankakee, IL	29,000	2009	\$14.70	100	\$0.61	0.34%

* - Website has two online-only offerings, weighted average price shown

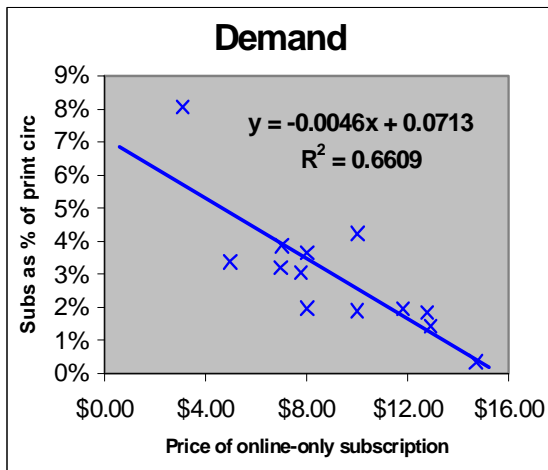
** - Revenues measured as annual dollars per unit of print circulation

*** - Subscribers measured as the number of online-only subscribers as a percentage of print circulation

It is assumed that the number of online-only subscribers to a newspaper website is proportional to the size of the total population interested in the content generated by the newspaper. Because the size of this population is also proportional to print circulation, Revenue and Subscribers figures above are normalized by print circulation size.

Demand

Economic theory and common sense tell us that the number of people that will take an online subscription is inversely proportional to the subscription price. As the price of a subscription goes up, the number of subscribers goes down.



The Demand graph shows each newspaper as a point on the graph with the monthly price of an online-only subscription on the horizontal axis and the number online-only subscriptions as a percent of print circulation on the vertical axis.

The straight line shown is the closest fit to the data; Correlation is measured by R^2 on the graph. An R^2 of 1 is 100% correlated (all points are on the line). A negative R^2 means the variables are not correlated.

Here we have a positive .6609; one can say this data indicates that the number of online-only subscriptions is 66% correlated to price charged.

A low correlation means that there are factors other than subscription price and print circulation that drive the demand curve. The factors might include price

charged for the print edition, market area-specific advantages or disadvantages, competition, content and website quality, etc.

In spite of this less than optimal fit, one can still see that the number subscribers is clearly inversely proportional to price charged.

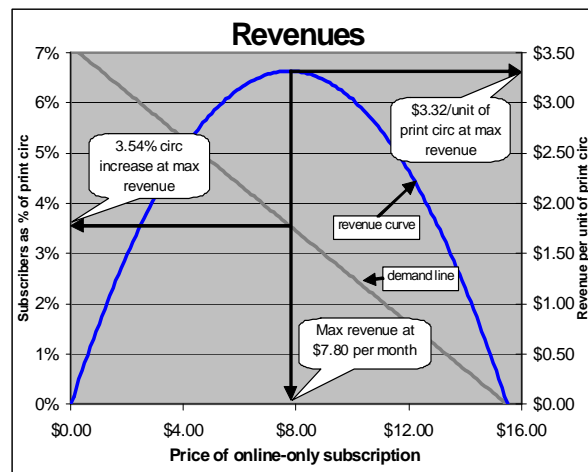
Revenue

Revenue generated by a website is equal to price charged times the number of subscribers. The Revenue graph below shows the expected revenue for each price point and is derived from the straight line in the Demand graph.

Revenues approach zero quickly at low subscription prices and as price is increased there is a slowing in revenue growth to a peak and then an accelerating drop off to zero.

The graph can be used to determine the price at which maximum revenue is obtained by dropping a vertical line from the peak of the revenue curve to the subscription price per month axis. This indicates the maximum revenue is generated at a subscription price of \$7.80 per month.

By drawing a horizontal line from the peak of the revenue curve to the revenues per unit of print circulation axis, we see the maximum revenue should be about \$3.32 per year per unit of print circulation. At the \$7.80 per month price, a 10,000 circulation paper can expect about \$33,200 will be generated when they implement a paywall, a 100,000 circulation paper would expect \$332,000.



The point at which the vertical line from the peak crosses the demand line indicates online-only subscribers will be 3.54% percent of print circulation. A 10,000 circulation paper will get about 354 online-only subscribers and a 100,000 would get 3,540.

Do print subscribers move to online-only?

Publishers are concerned that their print subscribers will move to online-only because in-market print subscriptions are highly valued by their advertisers. Many publishers would like all out-of-market print subscribers to move to online-only because of the cost and delays that occur with US Mail delivery.

The Oil City Derrick has diligently monitored this and reports that only five of the new 1,185 online-only subscribers had dropped their print subscription and of those five only one was in-market.

How much does the website traffic drop when the paywall is implemented?

[According to Quantcast](#), the Oil City Derrick, saw a roughly 40% drop in traffic after implementation of their paywall in October of 2009. The Lima (OH) News [reported a 28% decline](#). Can the websites command a higher price per exposure for advertising to make up for the traffic reduction because the website is now paid? Paid newspapers often command higher print advertising prices when compared to free newspapers but this is an open question for websites.

Conclusion

Publishers of daily newspapers will be glad to hear that, at \$7.80 per month for online-only access, they can add about 3.5% to their total subscriber base with only minimal loss of print subscribers to online-only. Publishers should expect a significant drop in website traffic; however, many will feel that the quality of the remaining audience is significantly higher; hence the net is that the impact on traffic is not as large as it may first appear. Higher advertising CPM rates should be commanded by paid websites over free ones.