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THE PUBLISHER'S DILEMMA

*Matt Lindsay, President -
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The Publisher's Dilemma

One of the most difficult analytical challenges facing digital publishers is measuring the effect of quality on revenue and profits. Quality is a characteristic, much like beauty, that is in the eye of the beholder. What counts as quality content and an excellent user experience to one reader may be irritating to another. Quality is hard to measure because there is no recognized “quality” attribute with definable dimensions. Is it the frequency of publishing new articles? Is it the average length of posted videos? Despite the challenge of measurement and consensus, quality is a “thing,” and it is the attribute that differentiates digital publishers most profoundly.

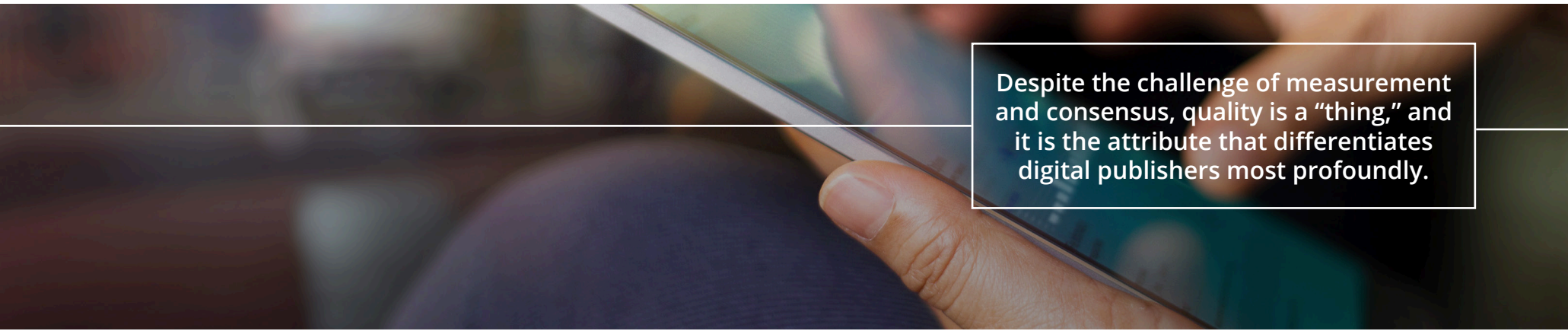
High quality products lead to greater user engagement. While not universally defined, engagement for a customer can be captured in their frequency of visits, the time since their last visit, and the time they spent on the site. Other dimensions of a visitor's interaction with a site can be used to measure engagement too, but these three metrics are most often used by leading digital publishers. User engagement is observed to lower churn among existing subscribers and to increase conversion of non-subscribers. Certainly, there is value in keeping more of your existing customers and getting more new ones, but what is that value? How much investment in quality content, and thus engagement, is justified? How many advertising positions should be removed, and revenue lost, to improve the customer experience? These questions are at the heart of the publisher's dilemma.

The publisher's dilemma is the challenge of maximizing total digital revenue, from advertising and audience customers, when the demands these revenue streams place on the product are contradictory. In the most basic characterization of this dynamic, **advertising revenue depends on *Quantity* of audience impressions while audience revenue depends on *Quality* of content.** Digital advertising revenue is a function of the number of impressions delivered and the effective CPMs for those impressions. Digital audience revenue is a function of subscription

sales attempts and conversion rates while acquiring new customers and retention and average rates while managing existing customers. At their core, these two digital revenue streams are in opposition, and for editorial staff and newsrooms, balancing these two sources of revenue requires balancing the quality of the product with the quantity of the product. Executing integrated product design and product pricing strategies is crucial for publisher's success.

As digital advertising revenue begins to level off, and in some cases decline, on publisher sites, the need for greater audience revenue is paramount. The trend in the publishing industry for years has been to erect paywalls to limit consumption of the content to non-paying visitors, but too often this desire for paying subscribers has not been supported by an increase in the quality of the digital product, which has led to poor conversion rates and low digital-only subscription sales. Some publishers have tried multi-site strategies, notably the Boston Globe and the Atlanta Journal Constitution. They have targeted one site at the large non-paying audience and another site at their paying digital subscribers. The site targeted towards the paying digital audience has a better user experience, higher quality content, and less advertising. The site targeted towards the non-paying audience is the opposite. Other publishers have focused on growing digital advertising revenue with minimal digital audience revenue. They have no paywall and do not offer digital-only subscriptions. To support the advertising-only revenue model, they capture as much data as possible on their audience and use it for targeting ads to increase their average CPM. Risks of this advertising-only strategy are that the additional tracking and targeting may cause site speed to slow down, and the data capture on the audience may become burdensome and annoying to the users. These sites typically have a lower quality user experience in the form of more advertising and less quality content.



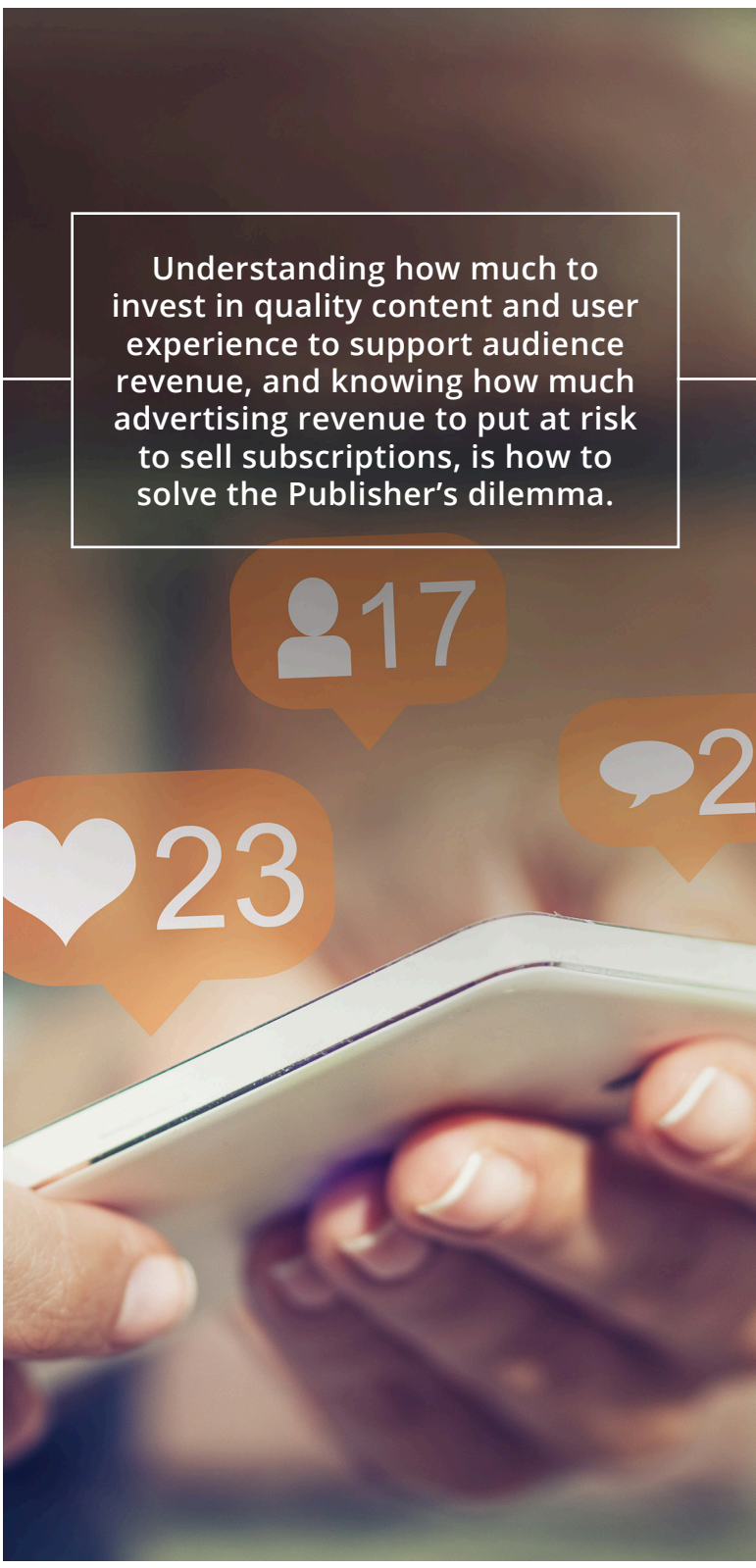


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So, what performance metrics are important for balancing quantity and quality and thus advertising and audience revenue? In addition to the user engagement metrics mentioned previously, important data to capture includes the total digital revenue by individual user. This can be difficult because it requires attaching advertising revenue from the impressions delivered to an individual user to the site traffic data for that individual. The publisher should also capture data on what happened to individual users as they went through a payroll funnel so they can analyze the effectiveness of subscription offers. Using these data, a publisher can identify the combination of product attributes, including premium content access, quality user experience, and price point, where expected advertising revenue and audience revenue is maximized.

There are many analytical approaches that yield insights into the return on quality content and better user experience, including estimating customer’s propensity to subscribe, segmentation of the online audience, hedonic pricing models that measure the effect of individual product characteristics on price elasticity,

and retention models using survival analysis. These tools are helpful when used within a framework for optimizing total digital revenue where the effects of business rules on each revenue stream are quantified. As with many economic questions, the point of maximum revenue for firms that have two distinct customer groups, such as advertisers and audiences, is where the next dollar of one type of revenue costs you one dollar of another type of revenue. This “trade off on the margin” is a standard economic concept that supports many type of optimization applications. In digital publishing, the optimal revenue model is unlikely to be 100% advertising revenue or 100% audience revenue because there are often “easy” dollars to be captured in both categories where you do not have to give up revenue from one stream to get incremental revenue from another. Where the optimal balance between revenue streams falls for each publisher depends on their unique audience segments, advertising inventory, and products. Off-the-shelf algorithms are unlikely to fit a particular publisher’s business because no publisher’s site or products are “average.”

A hand holding a smartphone is shown in the background. Overlaid on the image are several social media notification icons in orange speech bubbles: a heart icon with the number 23, a person icon with the number 17, and a speech bubble icon with the number 2.

Understanding how much to invest in quality content and user experience to support audience revenue, and knowing how much advertising revenue to put at risk to sell subscriptions, is how to solve the Publisher's dilemma.

To take the example of optimizing revenue streams on the margin one step further, consider the question of determining the optimal paid content threshold, whether it is in the form of a meter or a more general “premium content” strategy. The optimal paid content strategy for a digital product would be where the paywall restricts access to content for an audience segment where the expected audience revenue from the next paywall “hit” is equal to the lost advertising revenue from limiting access to that content. If the expected audience revenue was greater than the lost advertising revenue required to make that subscription sale, the access should be further limited so that more subscription sales are attempted. The same logic holds in reverse. If the lost advertising revenue is greater than the expected audience revenue from the paywall, more content should be offered for free. As you have likely surmised, this optimal strategy is dynamic across time and not consistent across the entire digital audience for a digital publisher. Segmenting the audience based on their propensity to subscribe and price elasticity, and understanding the demand for digital advertising inventory that different audiences provide are key elements of optimizing total digital revenue.

The publisher's dilemma is a critical challenge not only for news media companies but also for many digital companies that rely on a mix of revenue streams, particularly those, like publishers, where the needs of their two customer groups have such different effects on the product. Understanding how much to invest in quality content and user experience to support audience revenue, and knowing how much advertising revenue to put at risk to sell subscriptions, is how to solve the Publisher's dilemma.



PAYWALL CONVERSION

Arvid Tchivzhel, Director, Product Development & Data Science Services – Mather Economics

Paywall Conversion Metrics/Benchmarks

This month, we look at the conversion funnel (the path users take from anonymous visitor to paid subscriber) and the performance at each stage of the funnel. There are four primary parts of the conversion funnel that are common across most publishers:

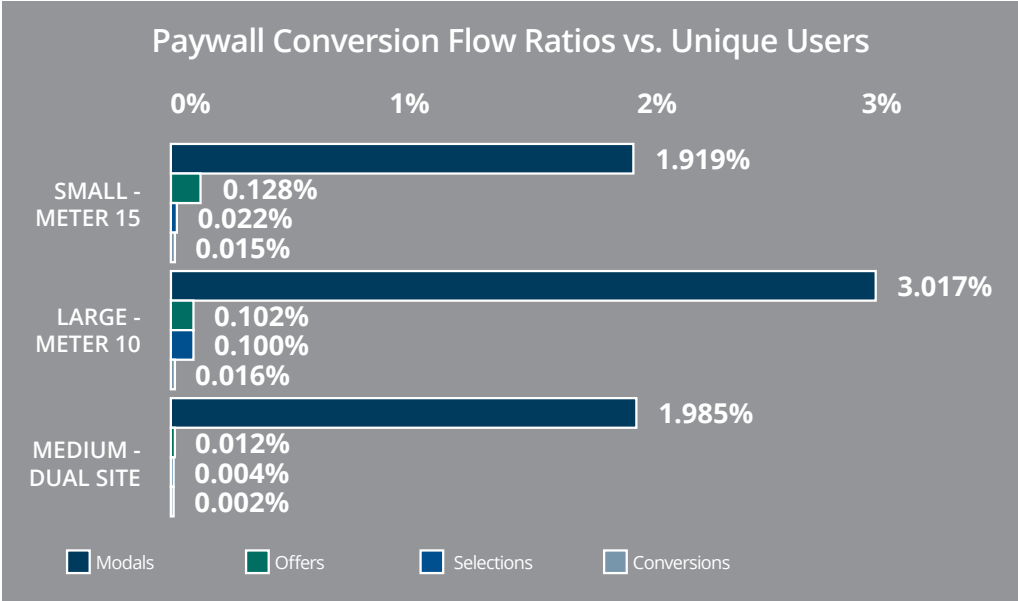
1. **Modal** – usually a pop-up, lightbox, or any other method of blocking access to content
2. **Offers** – multiple products are presented to the user to choose
3. **Selections** – the user chooses one product and moves on to the billing/checkout phase
4. **Conversions** – the user pays and becomes a subscriber



To compare performance, we took a snapshot of three very different markets in different parts of the country with different paywall strategies. The three markets are anonymized and all stats are monthly:

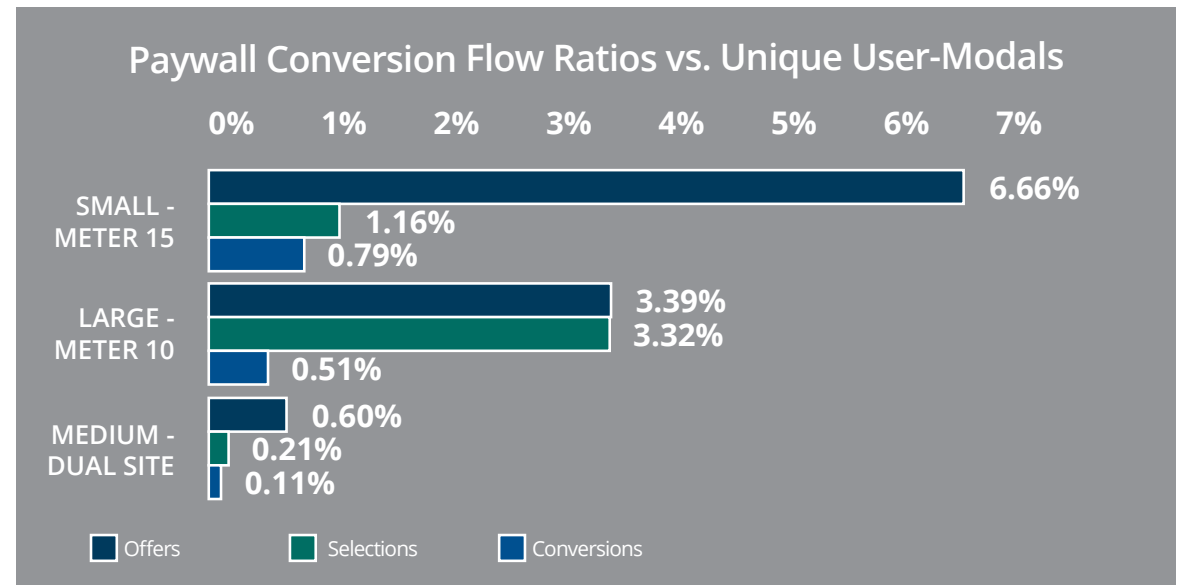
- **Small size West coast**
 - 6.5M page views and 1.5M visitors
 - Meter of 15
 - \$9.99 digital-only offer with \$0.99 4-week free trial
- **Large size East coast**
 - 22M page views and 5M visitors
 - Meter of 10
 - \$12.95 digital-only offer with \$0.99 4-week free trial
- **Medium size Midwest**
 - 16M page views and 2.5M visitors (500K PVs and 135K visitors on premium site)
 - Dual-site free/premium
 - \$9.99 digital-only offer with no free trial

- *The lower meter setting for the large market triggers the paywall for over 3% of all users vs. less than 2% of users for the smallest market*
- *However, a similar conversion rate is observed for both the largest and smallest market (0.016% and 0.015%, respectively)*





- Hypothetically, the smallest market could lower the meter from 15 to 10 articles per month and grow volume but the conversion rate would likely drop slightly due to a lesser engaged audience encountering the 10-page meter
- Compared to the users who trigger the paywall (exhausting their meter count) the smallest site shows a conversion rate of 0.79% compared to 0.51% for the largest market
- Even though the largest site moves more users from “offers” to “selections”, their conversion rate is lower than the smallest site





- *The largest market shows that over half of all new subscribers from the website actually don't trigger the paywall but rather voluntarily click the Subscribe Button*
- *Similarly, the medium sized premium site shows that 2/3rd of all new starts are initiated by a voluntary click of "subscribe now" rather than following the traditional conversion path*
- *The lesson learned is though the paywall conversion flows are important, digital subscription success should be measured holistically*

