

FINANCIAL ANALYSES*

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1 Establishing a Financial Performance Baseline

To evaluate the financial implications of offering an online edition, a society should establish a financial baseline against which to compare the journal's projected future performance. This baseline analysis should include:

- Revenue sources and trends, including institutional subscription fees, allocated member dues income, and other income sources;
- Expense sources and trends for the journal's print edition, including both variable costs (including printing, binding, and fulfillment) and fixed costs (including first copy costs, marketing, and administration);
- Membership dues trends for individual members and pricing trends for institutional subscribers; and
- Operating margins and surpluses or deficits for the journal.

The baseline analysis provides a basis for assessing the financial risk that a society might incur, and the benefits that it might enjoy, in moving to online distribution of its journal, whether via outsourcing or self-publishing. Most of the elements of a journal's financial history are straightforward, and many societies monitor this data as a matter of course. Below, we have provided some observations on additional revenue and cost analyses that a society may want to take into consideration. Some of this data will be necessary to support the analyses described in the previous sections.

2 Member and Subscriber Analyses

2.1 Individual Member Information

Detailed and reliable data on its membership will allow a society to evaluate the potential effect of an online edition on its membership. Much of this data the society may already have at hand, including individual membership data by:

- Member type (for example, regular, student, life, emeritus, etc.), including membership trends over time. Understanding the composition of the member base will often help a society anticipate the prevalence of member behavior and preferences.
- Institutional affiliation (for example, four-year college or university, two-year college, commercial firm, private practitioner, etc.). Developing a membership profile by institution type will help the society to determine the extent of its exposure to online site licenses (see "Assessing Exposure to Online Licenses," in Chapter Three). Ideally, a society will be able to correlate the institutional affiliations of its individual members with its institutional subscriber base.

*Version 1.1: Aug 24, 2010 4:36 pm +0000

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- Geographical region (for example, North America, OECD developed countries, LDCs). Analyzing member geographical distribution can allow a society to estimate the potential cost savings from online-only distribution options, as well as the potential effects of different prices by region.

Sometimes this member data will need to be mined, cleaned, and normalized. The amount of effort that a society should expend on this effort will depend on its ability to tolerate risk in projecting member behavior.

Besides the basic member data, more detailed behavioral and preference information may prove valuable in assessing the effect of online availability on membership. This information includes:

- Whether membership in the society is a member's primary professional affiliation, or a secondary or tertiary membership;
- Member profession (for example, faculty, student, practitioner);
- Member preference for a personal print subscription; and
- Overall perception of the society's benefits.

To gather this information, a society will often need to supplement membership registration data with data gathered through member surveys.¹

2.2 Institutional Subscription Analysis

It is important to analyze institutional subscription trends in as much historical depth as possible. Over time, institutional price increases can mask the effect of gradual declines in institutional subscriptions. Therefore, a society must carefully monitor the trend in its institutional subscription units, as well as in revenue.²

In addition to historical institutional subscription trends, understanding the complexion of a journal's institutional subscribers by institution type allows a society to:

- *Estimate the institutional demand for the online edition.* Not all types of institutions will exhibit the same demand for the online edition of a journal. While institutional libraries exhibit considerable demand for online journals, the demand may not be as prevalent for other institution types that may be represented in the journal's subscriber base. An understanding of the journal's subscriber base will help the society estimate the potential uptake of an online edition.
- *Establish appropriate prices for an online journal.* The value perceived in online and print editions can also differ by institution type. Most libraries accept tiered pricing for online services that take into account the size of the institution's user base. Detail on a journal's institutional subscriber base allows a society to develop online pricing that aligns with the value the institution perceives in the service (see "Institutional Subscription Pricing," in Chapter Five).
- *Identify under-represented market segments for future marketing efforts.* Most small societies have limited and passive sales activities. A detailed profile of a journal's institutional subscriber base might suggest market segments that a society might penetrate more deeply through increased marketing and sales programs. The potential of such campaigns will be affected by several variables, including the age of the journal and the nature of the target markets.

3 Allocated Member Dues

Some societies only show institutional subscription revenue on their journal financial statements. Other societies determine the cost of fulfilling individual member print subscriptions and explicitly allocate a commensurate portion of individual member dues to the operation of the journal. Whether it is captured on the journal's financial statement or not, an explicit understanding of the dues required to provide the member publication benefit is of practical importance, as it allows a society to:

¹For an overview of conducting a membership survey, see Dalton and Dignam (2007), 98-102.

²There are few empirical sources on subscription trends for society journals. Anecdotal evidence, and the publicly available studies, suggest that subscriptions to individual titles have been decreasing by about 3- 4% per year. See, for example, Watkinson (1999), which analyses UK journals.

- Determine the journal’s actual financial performance;
- Evaluate the financial implications of various member publication benefit options; and
- Allocate resources rationally across all society programs.

Allocating member dues to a journal’s income statement based on the variable cost of goods sold (COGS)—that is, the marginal cost of delivering each incremental member print subscription—will provide many societies with the most meaningful basis for making business decisions (see “Variable Costs of Goods Sold,” below).

Determining the COGS serves several purposes. First, it provides a society with the accurate marginal cost of providing the member publication benefit. Second, segregating the marginal cost of providing the print edition will allow the society to compare the financial effects of various print and online distribution scenarios, and will inform its pricing of an online edition of its journal (see “Member Publication Benefits” and “Institutional Subscription Pricing,” in Chapter Five).

4 Variable Costs

A thorough understanding of its publication program costs will allow a society to make well-considered decisions about the print and online editions of a journal, and will also inform decisions about resource allocations across other society activities.³ Therefore, we have described below some of the basic cost elements relevant to managing a society journal.

As we have noted previously, publishing costs fall into two broad categories: variable costs and fixed costs. Variable costs are volume-driven and fluctuate depending on the number of subscriptions. Variable costs for a print edition of a journal include:

- *Printing and Manufacturing*, including paper, printing, binding, and typesetting-composition.
- *Print Distribution and Fulfillment*, including postage, handling, and fulfillment charges for print subscriptions.

Identifying variable costs allows the society to determine its print cost of goods sold, as well as the revenue contribution for various journal format options.

4.1 Variable Cost of Goods Sold

Example Print Cost of Goods Sold	
Total Variable Print Costs*	\$50,000
Total Subscriptions	3,000
Variable Cost of Print	\$ 16.70

*Including paper, printing, binding, and fulfillment

Figure 1

The table provides an example of per-unit variable “cost of goods sold” (COGS) for a journal. The variable cost of goods sold is the cost that a society incurs for printing, manufacturing, and delivering each incremental subscription. For the print edition, it is determined by dividing total print and fulfillment expenses by the

³Colby and Rubin (2003) provide an excellent summary of the benefits of explicit cost allocations across nonprofit programs. King (2007) provides an overview of the costs of journal publishing.

total number of subscribers (both individual members and institutional subscribers). A society should calculate a journal's COGS for the three most recent years, to minimize the effect of year-to-year cost fluctuations.

4.2 Revenue Contribution

Revenue contribution provides a metric that can help a society compare potential member publication benefit options (for example, journal media options at various dues levels) and establish institutional prices for the journal.

The table below illustrates hypothetical revenue contributions per unit (in dollars and as a percentage) that member and institution types would make towards covering a society's costs. In other words, the revenue contribution (that is, unit price less unit variable cost) reveals how much income remains to cover a society's fixed costs and contribute to a journal's operating income after the society pays for the cost of providing the journal.

In the example, which uses a COGS of \$17.00, 83 cents of each regular member dues dollar is available to cover the journal's fixed costs and contribute to an operating surplus to help cover the society's overhead.

Example Revenue Contribution by Subscriber Type

Member/Subscriber Type	Dues/Price	Revenue Contribution	
		\$	%
Regular Member (Dual Media)	\$100	\$83	83%
Student Member (Dual Media)	\$45	\$28	62%
Institutional, Print-only	\$220	\$203	92%
Institutional, Online-only	\$200	\$183	92%
Institutional, Dual Media	\$240	\$223	93%

Figure 2

Typically, as in the example, the revenue contribution for student members will be lower than other member types. This discounted dues strategy makes sense for student members, many of whom become regular members over time.

A society may also have multiple member levels and/or dues levels (for example, dues based on the member's annual income). The society will need to assess whether such complexity will have a material difference on its analysis.

5 Fixed Costs

Fixed costs are those costs that the society incurs regardless of the size of the journal's subscriber base. They are sometimes referred to as "first copy" costs, as they represent the costs required to create the first copy of the journal. A detailed understanding of the society's costs for these categories will provide a basis for monitoring operating efficiency over time, as well as for evaluating possible outsourcing arrangements.

5.1 Direct Costs

Fixed costs can be separated into content creation and publishing support activities. Content creation costs include the costs of acquiring, certifying, and creating the journal's content, including editorial office costs, editor stipends, copyediting, proofing, and composition costs. Publishing service costs include direct or allocated staff costs, journal marketing, advertising sales, and management costs. The category also includes copyright fees, print inventory storage, and any other fixed non-editorial costs.

5.2 Indirect Costs

In addition to the direct fixed and variable costs described above, the society may want to estimate indirect costs, including the average amount of staff time directed towards journal publishing activities. This might include salary and benefits for management and administration; accounting and financial management; advertising tracking, offprint provision, administrative support; and subscription fulfillment.

Tracking these staff costs allows the society to manage and improve the operating efficiency of its journal program. It also allows the society to identify potential cost savings that might be realized by outsourcing some or all of the publishing functions. In some instances, the society would realize cost savings by being able to reduce staff costs; in others, the savings would derive from freeing staff resources to pursue other activities, thus lowering the society's opportunity costs.

6 Financial Sensitivity Analyses and Stress Tests

Projecting the financial performance of a new online edition of a journal will be subject to multiple cost and income variables. These variables, and the inherent nature of projections, render precise financial estimates impossible, even when reliable market information is available.

The best a society can do is to test the sensitivity of its financial projections to ensure that the society is not unduly exposed in the event that the society's costs and/or income projections vary more than anticipated. To better understand the risk caused by this uncertainty, a society can test the sensitivity of the financial projection for several key variables—including operating costs, institutional subscription adoption rate, and individual member retention—to identify critical performance benchmarks that the society should monitor.

6.1 Operating Cost Sensitivity

A society can test its cost scenarios—for both development and ongoing operating costs—to determine the cost over-runs that the society could sustain before the journal's net income would drop below an acceptable level. (The financial baseline described in "Establishing a Financial Performance Baseline," above, provides a basis for determining an acceptable performance threshold.)

If such a stress test indicates that a society could incur one-time development and/or annual operating costs substantially higher than those estimated for an online edition before falling below an acceptable financial performance threshold, then the society should have a sufficient margin of error from a cost perspective. On the other hand, if a relatively slight cost overrun would lead to an unacceptable financial result, the society may need to reduce its development or operating costs, or adjust its pricing to provide a greater operating cushion.

6.2 Institutional Subscription Adoption Rate Sensitivity

While it is safe to predict that academic libraries will continue to prefer online-only subscription options, it is far more difficult to determine specific uptake rates by medium for any given field or discipline, let alone for a specific title. It follows, therefore, that projecting revenue by format option after the launch of an online edition will be inherently imprecise.

If a society adopts a pricing approach (such as those described in Chapter Five’s “Member Publication Benefits” and “Institutional Subscription Format Options”) that renders it largely indifferent to the adoption rate of an online edition, even substantial fluctuations in uptake scenarios should have little effect on net income from subscriptions. However, a simple way to test income sensitivity by medium would be to run the journal’s financial projection assuming a worst-case scenario wherein all institutional subscribers opt for the version of the service providing the lowest revenue contribution (see “Revenue Contribution,” above).

6.3 Individual Member Retention Sensitivity

Chapter Three’s “Assessing Exposure to Online Licenses” describes how a society can estimate its exposure to potential risk posed by institutional online site licenses. Once a society has assessed the approximate risk to individual memberships it might face, it would be prudent to determine the potential effect on net dues income were the society’s members to demonstrate less-than-anticipated commitment to the organization.

A society can project the net dues income that it would forgo (that is, member dues less the cost of providing all member benefits) were its membership base to decline n percent more than anticipated. The loss threshold that the society tests will depend on its confidence in its risk analysis. If the society is confident in its estimate, it might use a lower percentage. Obviously, for most societies, any significant loss of membership would be more important than the foregone dues income.