

The MIT Press

Open Monograph Model:

Direct to Open

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1.1 Context

It has long been recognized that conventional market models do not provide a viable economic basis for publishing specialized scholarly monographs. Indeed, the very existence of North American university presses represents an attempt to provide an alternative to commercial publishing imperatives.¹

In recent years, the continued deterioration of library monograph purchasing—driven by a combination of demand-driven acquisition and flat library acquisition budgets—has further weakened the single-title market sales model. Although ebook sales have increased, ebook revenue has not been sufficient to offset the decline.² Moreover, the availability of scholarly monographs as ebooks allows libraries to defer monograph acquisitions until a local need has been demonstrated. MIT Press (MITP) has not been immune from these forces. Over the past decade, average print runs for Press monographs have declined from 1,500 to fewer than 500 copies.

Although budget constraints are a critical factor, the declining library market for monographs can also be attributed to the low use of monographs relative to other resources and to the perception that they are an underperforming asset for many academic libraries.³ Despite subsidized prices, the cost of monographs makes them too expensive for individual researchers to acquire all the titles they require. At the same time, specialized monographs remain critical to communicating foundational scholarship (and to the tenure and promotions processes of most institutions, especially in the humanities and social sciences), and the healthy online use of open access monographs demonstrates their continued relevance and value.⁴ As a result, compelling arguments have been made for the open dissemination of monograph content, especially given the low marginal cost of digital distribution.⁵

In this context, the MIT Press, supported by a grant from the Arcadia Fund, has undertaken to develop and implement a business model capable of disseminating the Press's scholarly monographs open access.⁶ The model's design needs to provide sufficient and stable revenue, while being equitable to authors, readers, libraries, and other stakeholders. To accelerate market acceptance, the open monograph offering will leverage existing Press distribution channels and library procurement processes.

The model, christened Direct to Open (D2O), covers the Press's "professional" books, defined here as original foundational scholarship, intended primarily for specialists, as distinguished from "trade" titles, which synthesize prior research and aim for a more general audience. MITP currently publishes between 90 and 100 specialized monographs a year, representing about 30% of each year's frontlist, and anticipates maintaining that output on an ongoing basis.

¹ See, e.g., Kerr 1949, Chapter 15.

² Based on acquisitions data from a sample of 51 North American institutions, library expenditures for university press print books declined almost 18%, in real terms, between 2014 – 2017, while expenditures for single-title e-books rose 0.4% over the period. See Daniel, Esposito, and Schonfeld 2019, 33, 35 – 37.

³ Several library studies suggest that only about half of print monographs circulate, even over extended periods. See Walker *et al.* 2010 and Levine-Clark *et al.* 2009.

⁴ Using downloads as a metric, Simba estimates the average readership per monograph to be in the low thousands. Newman and Stempel 2018, p. 14. For example, Knowledge Unlatched has reported an average of about 3,000 downloads per title, which is consistent with the use reported by other OA monograph publishers. UCL Press claims two million downloads on its 125 open titles. McKie 2019.

⁵ See, e.g., Moore 2016.

⁶ Publishing Press monographs under an open model would also align the Press with MIT's institutional open access policies intended to increase the open sharing of MIT publications, data, and educational materials. <https://libraries.mit.edu/scholarly/mit-open-access/>

The Press currently has 37 Arcadia-funded titles available on its MIT Direct platform, with an additional 7 titles in process. These Arcadia-funded titles will serve as controlled tests for online use and for print and value-added ebook sales for OA titles.

The MIT Press launched the D2O program in March 2021. The Press expects that the open model will coexist with the sales of trade and other titles on MIT Direct, the Press's institutional platform. The Press launched the Direct platform in early 2019 in an effort to disintermediate ebook delivery and allow for more direct communication with libraries. The platform offers DRM-free access to the MIT Press book program, from the beginning years of the Press through to the current year. The Direct platform also provides the Press with a central home for open access books.

1.2 Proposed Model Overview

This document describes Direct to Open, a collective model for supporting the open dissemination of MITP frontlist monographs (frontlist here defined as monographs published in the current calendar year). The model is designed to induce support for the open offer by balancing the dual motivations of academic research libraries: the perceived value of private benefits, exclusive to contributing institutions, on one hand, and the expression of support for the Press's aligned nonprofit mission, on the other.

To motivate libraries and other institutions to participate, the model:

- Breaks the monograph titles into two subject collections—'Social Sciences & Humanities' and 'STEM/Art & Design'—to offer low participation costs and allow more institutions to participate;
- Sets tiered participation fees that are low relative to the value delivered and to the resources of the institutions targeted for support;
- Makes opening of the frontlist contingent on the offer reaching a specific financial support threshold;
- Provides single-year term access to the monograph backfile for institutions that commit to supporting the offer for the corresponding frontlist, even if the collective frontlist offer were to fail; and
- Offers participating libraries substantial discounting on the Press's Trade collections in Direct.

The model seeks to generate revenue sufficient to replace the revenue that the monographs currently generate. The model attempts to balance support fees low enough to attract library participation with realistic assumptions about the number of participating institutions.

Given the size and diversity of the target group required to achieve the low participation fees—approximately 500 colleges and universities worldwide—the Press will coordinate participation in the offer primarily via library consortia. A consortia outreach strategy seeks to exploit the missions, group dynamics, and communication efficiencies of library consortia.

1.3 Planning Phases & Report Structure

Developing the Press's open model will comprise several iterative phases. The first phase—summarized in this report—examined the context for designing the Press's open model and explained the logic behind the model's design. The subsequent phase is exploring practical implementation strategies and testing D2O with libraries and library consortia. The model will be modified and refined based on market feedback during the roll-out phase.

This report describes the analyses for the initial phase and is structured as follows:

Section 2 describes the success criteria and design parameters specific to an open monograph model for the Press.

Section 3 reviews public goods provision approaches and collective model design issues as context for understanding the specific elements of an open model for the Press.

Section 4 describes a D2O prototype model that addresses the Press's design requirements and success criteria.

Section 5 discusses prevalent open monograph models and their applicability to nonprofit publishers.

Section 2—Open Model Design Criteria

In addition to the collective action issues that needed to be addressed (see §3), the design of D2O was shaped by the Press's objectives for the model, as well as by the characteristics of the MITP monographs, the market context and constraints, and practical implementation issues. As context for understanding the rationale behind D2O, we describe below the success criteria and design constraints that have driven the model's design.

2.1 Model Success Criteria

Given the challenges inherent in designing a viable open model for scholarly monographs, MITP limited its critical success criteria to several guiding principles. Those principles dictated that the Press's model would be:

Immediately Open—The Press monograph content will be open and free to all end users, without an embargo period, and under an open license. The model uses a Creative Commons license; ideally, CC BY, but using the non-commercial and non-derivative variant as the default to ensure author acceptance and/or to strengthen the Press's open business model. This does not preclude making openness conditional on financial support from libraries or the sale of value-added versions (both print and digital) to individuals. However, it does reject the use of digital rights management (DRM) to restrict use.

Economically sufficient for all Press monographs—The model must generate revenue sufficient to replace the current revenue for the entire MITP monograph program, taking into account existing operating subsidies (see §2.3). Financial viability must also take the costs of implementing the model, and administering it on an ongoing basis, into account.

Stable over time—Revenue from the model must be stable in the long-term. Therefore, the economic logic of the model must be resilient to changes in the market environment to ensure financial sustainability over time.

Inclusive and equitable—The model must ensure inclusive access for authors, regardless of ability to pay, and provide equitable participation terms for all types of contributing institutions.

Integrates with current editorial processes—To facilitate author acceptance of OA dissemination, the model uses MITP's current editorial, publishing, and sales and marketing processes in order to minimize (or avoid entirely) any perceived difference with conventional monographs. The modeling leaves aside innovations in digital presentation, peer review, and other developments extraneous to the business model itself as beyond scope.

Integrates with existing online and print distribution platforms—MITP intends to distribute the OA monographs via the MIT Direct online platform, although whether MIT Direct will be the Press's exclusive distribution channel for the OA monographs remains to be determined. The Press also intends to continue to sell the monographs in print and via value-added digital formats, such as Kindle.

Unilaterally applicable—Although it should be replicable by similar presses, the model should not require collaboration with other presses in order to implement. MITP must be able to introduce the model unilaterally.

Scalable—The model should scale to accommodate modest fluctuations in MITP's monographic output over time.

Replicable by other presses—The model should be extensible to other university presses. The extent to which this will be practically possible will depend on a press's similarity with MITP in terms of list size and composition, publishing strategies, brand and quality signaling, financial resources, and risk tolerance.

Each of the principles above has practical implications for the design of MITP's D2O model. In practice, some of the success criteria may need to be relaxed to accommodate the practical design constraints described below.

2.2 Design Parameters & Constraints

In addition to the success criteria above, there are several factors specific to the monograph market and to the MITP monographs themselves that affect the design of the model. These factors include:

- **Diverse market and sales channels—**

The current market for the Press monographs comprises both institutions and individual consumers, with the institutions themselves varied in terms of type, size, location, and demand. This means that the model either needs to capture revenue from both the consumer and institutional markets or needs to induce institutions to participate as proxies for their student and faculty researchers. The model also needs to account for differences in perceived value across institutions of different types, sizes, and geographic regions.

- **Scant market sales data—**

While the market for monographs is known to be diverse, a lack of granular sales data makes it difficult to identify specific target segments (or target groups for a collective offering) and to gauge the value delivered to individual institutions. The mixed wholesale and consumer channels for monographs make it difficult to track sales with any precision, which complicates identifying and sizing the market segments that might be targeted by an open model. This necessitates that the market projections be based on secondary market indicators, reducing their precision and predictability.

- **MITP title output and audiences—**

Absent reliable sales data, identifying potential target groups for an open model relies largely on secondary market information, including general library acquisitions patterns. Potential demand by subject area is assumed to follow the strength of the Press's list in the following areas:

- Art and architecture
- Brain and biological sciences
- Communication/information science
- Computer science
- Design and digital media
- Digital humanities
- Economics, business, and finance
- Environmental and urban studies
- Future of education and learning
- Linguistics and cognitive science
- New media and game studies
- Physics, math, and engineering
- Science, technology, and society
- Visual and cultural studies

Identifying the target group of institutions for an open monograph offering requires correlating, to the extent possible, the subject areas above with library acquisitions patterns. Additionally, the average number of titles published in each of the above subject areas has been used to inform projected demand for the open monograph collections.

- Participation leverage—

It is usually easier to devise a compelling open model for content that is not already open. The promise to open up closed content can be made contingent on specific support conditions being met, while existing open content typically relies to a greater extent on altruism to induce contributions. Given the need to maintain leverage to sustain a stable revenue stream over time, the model either needs to be recurring, with each year's frontlist content opened serially, and/or to involve some long-term collective agreement. Otherwise, the expectation that the monograph content will be provided OA might lead institutions to perceive their continued support as unimportant.

As discussed above, offering private benefits exclusive to contributing institutions may be necessary to motivate and sustain support for opening frontlist titles. In this context, we anticipate that providing year-to-year access to the backlist titles will be a key component of the model's value proposition, at least initially. Once an open frontlist model is in place, the leverage provided by the backlist's value will decline gradually over time. However, for MITP, the rate of that decline will be sufficiently slow that the backfile will deliver adequate value for the next decade and beyond (see §4.2.2).

From the perspective of developing an open frontlist model, therefore, we deemed it preferable to maintain the value of the backlist as an exclusive benefit. To that end, the Press decided not to open any additional backlist titles—including its 868 Internet Archive titles made available under Controlled Digital Lending—at least until the design of the frontlist model has been determined. In the short-term, this will increase our options for designing an open frontlist model. In the long-term, the backlist titles can be opened gradually once they no longer provide leverage for the frontlist model.

- Institutional procurement policies—

Many libraries struggle to reconcile the support terms of open models with institutional policies and practices optimized to the procurement of materials under conventional market models. In this context, offering term access to the monograph backfile as part of the open offer should satisfy institutional procurement policies that forbid the use of public funds for anything that does not deliver an explicit public benefit.

- Fee and value constraints—

The participation fee per institution that D2O might require is constrained by the average effective cost of MITP monographs under the current market model. In the context of a collective offer, the participation fee will need to offer a compelling economic incentive.

Setting fees for the open offer is complicated by the market being habituated to single-title monograph prices that are typically insufficient to cover first-copy costs, thus skewing the basis for comparison. In other words, monographs cost more to publish than the market would be willing to pay were they priced rationally. Moreover, the market demand for monographs is inadequate even at the current subsidized prices. This makes it difficult to set participation fees sufficient to cover direct costs (MITP's ideal financial objective), while also at a level sufficiently low to attract library participation.

- Market environment—

The fee constraints are also affected by the market environment, including library budgets and competitive budget substitutes. The open model will confront pandemic-driven budget retrenchment across the academic market, making an increase in revenue challenging. At the same time, we anticipate that one of the sociological impacts of the crisis—and its severe financial consequences for library acquisitions budgets—might be to make academic libraries more receptive to alternative funding models for content.

- Practical administration—

Addressing each of the design criteria and constraints described here increases the complexity of the model. At the same time, the Press needs to be able to communicate the model and implement it practically. We have indicated below where simplifying an element of D2O might reduce the strength or predictability of the model.

As noted above, these design constraints will sometimes impinge on the ideal success criteria outlined in §2.1.

2.3 Financial Target

Ideally, an open model would provide sufficient revenue to cover the *direct* and *indirect* costs of the MITP monograph program and also contribute positive net income. At a minimum, however, the D2O model needs to replace the revenue generated by the current sales channels.

2.3.1 Monograph Costs

MITP's monograph program carries high fixed costs for the selective acquisition, peer review, and developmental editing that support the quality signaling required for professional credentialing and that differentiate the Press from less editorially rigorous competitors. To help ensure author acceptance of OA dissemination for monographs, the Press will minimize any changes in the current publishing process. Therefore, the financial target for the Press's open model does not assume any cost savings in the financial modeling.

2.3.2 Replacement Revenue

Based on sales revenue for 2018 – 2020, approximately 85% of the monograph revenue is attributable to library sales, with the remainder coming from various consumer channels. At the same time, print sales

represent about 83% of the Press's monograph revenue. Although library print acquisitions continue to decline,⁷ preliminary evidence suggests that individual humanities and social science researchers continue to prefer the affordances of print for close reading. Moreover, actively disseminating monographs open access can enhance their discoverability, especially in the context of ebook aggregations, increasing the probability of print sales.⁸

The financial target seeks to replace library sales revenue, although reaching this target would not fully cover the Press's direct costs of publishing the monographs. In setting the financial target for D2O, we also assumed that a significant percentage of individual consumer purchasers will continue to value the affordances of print, despite the open availability of a basic digital edition. Therefore, for setting the financial target, we assumed that consumer print sales of monographs will continue at 75% of their current level.

To assess the performance of D2O over time, we have compared it against a baseline that projects the average annual growth rate for the most recent three years.

2.3.3 Revenue Targets by Collection

The D2O model offers two collections, broadly comprising HSS and STEM (including art and design) titles. On average, HSS and STEM titles represent about 60% and 40% of the Press's monograph frontlist, respectively, and this distribution has been applied to set the financial target for each collection.

2.4 MITP Monograph Sales Channel Assumptions

The design of the Press's open monograph model needs to address the markets the monographs serve and the value they deliver. While demand and value are integral to any business model, they pose different issues for open resources than they do for private goods. As discussed in §3.2, the size and composition of the MITP monograph market will influence how the open model is structured.

Designing the D2O model is complicated by the relative lack of detailed data about the current market sales of the Press's monographs. Ideally, the current sales patterns for MITP monographs would provide insight into the value that the monographs deliver to various market segments, including academic libraries (by type, size, and location), individual researchers/consumers, authors, and others.

This information would help identify the target markets for D2O and inform an approach to coordinating collective participation. Practically, however, the mixed wholesale and consumer channels for monographs do not produce detailed purchaser sales data.⁹ As a result, we can only approximate monograph sales patterns by market segment.

Absent better market data, we used the following discrete data points to refine our assumptions about monograph spending by various types of academic libraries. Based on the most recent year's data (FY2019), MITP monographs reflect the following broad purchase patterns:

⁷ Daniel, Esposito, and Schonfeld 2019.

⁸ While initial analyses suggest a neutral or positive correlation between OA availability and print sales, the evidence remains shallow. See, e.g., Ferwerda et al, 2016; Snijder 2014; and Speicher 2016. Better data will presumably be forthcoming from the "Sustainable History Monograph Pilot" (<https://longleafservices.org/blog/the-sustainable-history-monograph-pilot/>). A recent study demonstrates that OA dissemination of monographs increases social sharing and impact, reinforcing the assumption that open dissemination will increase visibility and result in print sales. See Taylor. 2020.

⁹ Press monograph distribution channels include direct sales, wholesalers and channel sales (including Amazon), MIT Direct online collections, limited participation in third-party online aggregations (e.g., Project MUSE, Knowledge Unlatched).

- 85% of monograph sales come from library sales via multiple channels, with the remaining sales coming from consumer channels. The remaining 15% of sales to researchers tend to be heavily discounted (e.g., author sales, special sales).
- North America accounts for approximately 60% of revenue and two-thirds of unit sales for Press monographs.

Additionally, assuming that MITP monographs reflect the same broad purchase patterns found across other publishers and all institutions, then:

- Single-title book sales (all book types) represent about 25% of materials expenditures, with university press titles accounting for about 25% of the print book market and about 20% of the ebook market.¹⁰
- STEM and other fields represent a declining proportion of book budgets, with libraries spending a larger share of their budgets on acquiring e-books in the humanities and social sciences.¹¹

The averages above mask considerable variation in the expenditures, usage, and format preferences across institutions, even within libraries of similar types and sizes. Nevertheless, in the absence of more precise data, they informed our assumptions about market sizing (described in §4).

Section 3—Public Good Approaches

Understanding the economic logic and organizational issues that affect the funding of open resources provides useful context for explaining the design of a model capable of funding the Press’s D2O program.

3.1 Approaches to Providing Open Resources

An open access monograph effectively assumes the qualities of a public good: that is, it is not consumed or reduced by use (i.e., it is non-rivalrous in consumption) and its use cannot be practically (or ethically) confined to those who pay for it (i.e., it is non-excludable in supply). The non-rivalrous nature of the open content means that it can be disseminated broadly, at little or no marginal cost. However, the content’s non-excludability creates challenges in funding its provision.

Non-excludability manifests itself as the collective action or “free-rider” problem.¹² Put simply, once the content becomes openly available, there is no way to exclude those who do not contribute to the content’s provision from the benefits it affords, and it is in the rational economic self-interest of institutions not to contribute.¹³ Although some sympathetic institutions might support an open resource initially, over time, the inequitable support burden will cause even those institutions to reduce or withdraw their contributions.

The collective action problem is not absolute, as not all institutions act based solely on economic rationality. There is ample evidence that many academic libraries will behave as conditional cooperators in certain collective situations, such as those where other institutions are known to be cooperating.¹⁴

¹⁰ Daniel, Esposito and Schonfeld 2019.

¹¹ Daniel, Esposito and Schonfeld 2019, 32.

¹² The term “free rider” does not refer to all individuals or institutions that gain access to open content without contributing. Rather, the term refers specifically to the non-participation of individuals or institutions within a specific group targeted for a collective action. In its proper sense, it is critical to defining the target group of contributors, to identifying “legitimate” non-participants, and to maximizing participation in the collective action.

¹³ Throughout this document, we use “institutions,” “libraries,” and “academic libraries interchangeably.

¹⁴ Fischbacher et al. 2001; Gächter and Herrmann 2009.

However, to maximize support and ensure long-term stability, the Press's D2O model was designed to overcome free riding and promote cooperation.

There are several principal approaches to addressing the collective action problem to support open resources:¹⁵

- 1) Small groups of institutions collaborating to provide resources that serve their needs, even if institutions beyond the group benefit from the investment. Small group solutions rest, in part, on the differing interests that institutions have regarding the exact form a public good will take, motivating institutions to contribute so that the open resource provided is optimal from the local perspective.¹⁶
- 2) Leveraging group affinity and social incentives to motivate collective support.
- 3) Inducing institutions to contribute to a resource by making it in their self-interest to do so, typically by providing private benefits exclusive to contributing institutions.

As a small-group solution would not apply in the case of the MITP monograph program, we focus on models based on collective behavior and/or private benefits.¹⁷

3.1.1 Altruism & Private Benefits

Motivations for contributing to the provision of open resources, including monographs, often lie on a continuum between altruism, where an institution acts without regard to the value it receives, and a private benefit, available exclusively to those institutions that contribute to the resource's provision. Where no exclusive benefit is conferred, an institution's contribution, though motivated by enlightened self-interest, essentially represents a voluntary payment.

As the procurement policies of many institutions (especially public institutions) forbid donative payments, a model based solely on altruism would pose a practical participation barrier for a significant portion of the target market for the Press's collective open support model. At the other end of the spectrum, where a private benefit motivates a library's participation, contributing to the provision of an open resource resembles a market transaction more than a collective action. In such cases, each institution's decision process is independent and the actions of other institutions are irrelevant.

In practice, maximizing participation to collectively provide an open resource will often require a combination of contributor self-interest and pro-social behavior. As a result, many open resources fall somewhere between the extremes of unalloyed altruism, on one hand, and self-sufficient private benefits, on the other. At the same time, there is an inherent tension between altruism and private benefits. Participation incentives tend to "crowd out" altruistic behavior, as offering an incentive may resemble a market transaction and imply that institutions would not be inclined to contribute otherwise.¹⁸

3.1.2 Coordinating Collective Activity

Again, if private incentives are sufficient to compel an institution to contribute to supporting a resource, the offer resembles a market transaction, rather than a collective action. In such transactions, each

¹⁵ See Oliver 1993. This discussion leaves aside compulsory taxation, which represents the primary way public goods are provided. Although institutions might agree to be bound by compulsory policies, coordinating such a covenant raises second-order issues.

¹⁶ See Stigler 1974.

¹⁷ There will often be an implicit private benefit motivation to small group collective actions.

¹⁸ See Frey and Jegen 2000; but also Gråd, Erlandsson, and Tinghög 2021.

institution's decision to participate should be logically independent, and the actions of other institutions should be largely irrelevant.

An open model that relies on pro-collective behavior, on the other hand, will require coordination sufficient to channel that behavior. Coordinating a collective offering starts with the assumption that members of the targeted group are willing (have demand) and able (have sufficient resources) to participate and that the extent of their commitment will be motivated, to varying degrees, by the participation of others. The offer's structure and coordination activity, in other words, focus on maximizing the level of contributions within the group, as well as increasing the size of the group itself.

High coordination costs represent the greatest obstacle to successful collective actions of all types. The design of a collective model needs to keep the costs of coordinating the action commensurate with the revenue generated. A conditionally binding participation agreement (known as an "assurance contract" or "provision-point agreement") provides a practical instrument for helping the Press overcome free-rider inertia in coordinating collective support. The terms of such agreements can be inherent in the structure of the open offer and need not be formal contracts. Given this approach, we have assumed, for modeling purposes, that the Press's open offer will rely on existing MITP sales staff and resources and be cost neutral.

An assurance approach will help the Press coordinate collective support for open monographs by making each institution's participation commitment contingent on a specified contribution level being reached. That is, institutions agree to contribute to the support of the monographs on the condition that enough other institutions also participate so that their provision is guaranteed. An institution's promise to contribute would only become enforceable after a specified number of potential contributors have also made contingent pledges. The Press is establishing a specific commitment window to coordinate participation in the open monograph offer.

The members of the target group (see §3.2.1) will pledge to support the open monograph offer contingent on an explicit contribution level being reached within a specified timeframe. If the threshold is reached within the timeframe, the D2O offer succeeds and the frontlist monographs are opened. If not, contributors are not obligated to participate and any pledges are vacated. If relevant, contributions in excess of the target may be rebated proportionally to the contributors or used to provide more of the public good.

3.2 Open Model & Offer Structure

Within a conditional assurance framework, constructing a specific MITP collective support offer to maximize the revenue generated required defining the target group for the offer, establishing a participation threshold, identifying participation incentives (including contingent-provision leverage and private benefits), defining commitment triggers, determining the recurrence and timing of the offer, and setting participation fees. It also entailed a description of how the offer should be communicated and administered in collaboration with library consortia.

We describe below how each of these design elements, along with corollary issues, relate to MITP's D2O model.

3.2.1 Target group

The size and composition of the group(s) targeted as participants in the open model will affect its design (in terms of value propositions and income models) and its cost structure (in terms of the activities required to deliver the value and translate it into income).

Factors that affect the propensity to collective behavior include the size of the target group, whether intermediaries or proxies are required (introducing a potential agency problem), the homogeneity of the group (e.g., in terms of institution type, demand for the service, and ability to pay), the social and cultural cohesion of the group, and the frequency and intensity of interaction and communication within the group. Larger scale tends to exacerbate each of the above factors in coordinating a collective support offer.

The target group for the Press's D2O offer comprises a large and diverse set of academic libraries, primarily in North America, the UK, and Europe. The market sizing and segmentation for the open monograph collective (see §4.3) comprises approximately 500 institutions of diverse sizes, types, and geographic regions. Such a large and diverse target group required a structured approach to generating participation. While defining the group of institutions targeted for the collective has similar implications as segmenting the market for a conventional service, there are important differences, including reliance on pro-group behavior and the ability to differentiate legitimate non-participants.

3.2.1.1 Pro-group behavior

Unlike a conventional market offering where each institution makes its purchase decision independently, in a collective offering the interaction between members of the group (and between subgroups of members) plays a critical role in the design of the offer and its potential success.

The diversity of the Press's monograph market limits the extent to which the Press can rely on intrinsic pro-group behavior—including altruism, anticipated reciprocity, and social incentives (including reputation)—to motivate participation in a collective offer. Stimulating such behavior would require segmenting the global market into local subgroups.

Smaller, socially cohesive groups are typically more amenable to collective coordination. A collective funding action is more likely to succeed the smaller the group, the more homogenous or complementary the group members' goals, the longer members of the group have associated with each other, and the closer the social and physical proximity of the group's members.¹⁹

Many library consortia exhibit the group affinity the Press needs to leverage in coordinating a collective offer. Communicating the offer and managing interactions via library consortia should effectively break a large-scale collective funding action into a network of smaller scale actions. Repeated, long-term interaction and communication between libraries within consortia fosters the trust, anticipated reciprocity, convergent interests, and social incentives that will make it possible for the Press to leverage normative pro-group behavior to motivate participation in a collective funding offer.

Other elements of the collective offer described below also rely on the group affinity afforded by consortia.

3.2.1.2 Distinguishing offer targets from legitimate non-participants

In a conventional market model, whether a particular institution purchases a service does not directly affect other institutions that do. However, coordinating participation in a collective model needs to take into account interactions between potential contributors.

In defining the target group for a collective offer it is necessary to distinguish—as far as practically possible—between legitimate non-participants and opportunistic free riders. Legitimate nonparticipants include institutions that might use the MITP content but will not benefit at a level sufficient to justify

¹⁹ Ostrom 1990.

contributing to its support at the minimum level. This distinction is important as otherwise institutions in the target group may incorrectly perceive low-demand institutions to be free riders, eroding anticipated reciprocity and collaboration between consortia members.

In practice, this distinction can be addressed positively, by identifying the target group(s) of institutions using mutually recognized characteristics—including institution size/type and anticipated use (based on an institution's research and teaching focus)—and identifying their affinity groups, as represented by their consortia affiliations. (The segmentation of the target group into discrete subgroups has been described in §4.3.)

As described below, setting a high participation threshold can also affect the potential success of a collective offer. The need to set a high threshold further reinforces the importance of defining the target group and differentiating legitimate non-participants (who do not count against the participation target).

3.2.2 Participation Levels

The potential openness of the Press's monographs (in the event the collective model succeeds) might tempt some institutions to withhold their participation until their contribution becomes critical for the success of the funding model. An institution will be more likely to participate if it perceives its contribution to matter to the success of the collective offering. In other words, if an institution perceives its individual contribution to be immaterial to the success of the collective model, it may see no reason to participate. Given this factor, as well as the importance of reciprocity and perceived equity, the coordinating mechanism for the collective model will work best when the success threshold for the offer requires a high percentage of the target group to participate.

While it may seem counter-intuitive, the higher the participation target, the more likely the collective offer will be to succeed. For example, an offer participation success threshold set at 80%, reduces the importance of each institution's participation and—by increasing the likelihood that a free-riding strategy would be successful—encourages group members to attempt to free ride. However, if the offer requires a participation level above (say) 98%, each institution in the target group is more likely to recognize the importance of its participation to ensuring that the offer succeeds and the content is provided. Stated differently, it reduces the likelihood that a free-riding strategy will succeed to less than 2%.

Therefore, the participation threshold for the Press's offer has been deliberately set high to accentuate the significance of each institution's contribution to the support model.

3.2.3 Conditional provision leverage & recurrence

Absent a private benefit exclusive to contributors, the Press needs to motivate institutions to contribute to the offer by 1) making opening the monographs contingent on adequate support for the offer and 2) setting support fees at a level that represents a compelling value.

Analogous to a conventional market transaction, each institution will evaluate its participation in the open offer based on the anticipated local value relative to price. However, in the context of a collective offer, the potential that the content may be opened to all might reduce the perceived value of the content to potential contributors. The practical implication for the open model is that the collective participation fees will need to reflect this perceived diminution in value.

To maintain conditional provision leverage from year-to-year and ensure stable revenue over time requires that the D2O offer be recurring. The offer might be repeated annually and/or on multiple-year cycles. Annual and multi-year commitments can coexist, as long as there is a single participation deadline for all institutions.

Conditional provision and the recurring nature of the offer mean that the model cannot guarantee *ex ante* that the open offer will succeed in any given year. While this uncertainty might seem to make the model unstable from year-to-year, the uncertainty increases the leverage of the offer and actually makes the model more stable.

3.2.4 Reducing Withdrawals Over Time

As MITP will rely on the D2O model to fund its monograph program from year-to-year, the model needs to reduce the risk of institutions withdrawing from the offer over time.

As with a subscription service, an institution participating in an ongoing collective action may need to withdraw its commitment at some future point due to a material change in circumstance (for example, a budget reduction or change in institutional teaching/research focus). Such “legitimate” withdrawals are inevitable over time, and the lost participation will need to be offset by recruiting new supporting institutions.

There is also a risk over time that some institutions might discontinue support for the offer under the assumption that the MITP content will continue to be provided openly, even without their support. The social dynamics within consortia might be expected to provide a more effective disincentive to such opportunistic behavior than any external policies that MITP might devise to counter it. Each consortia group will be better positioned to monitor whether a given institution's withdrawal reflects a legitimate change in circumstance or an attempt to free ride.

Section 4—D2O Model Concept

4.1 Overview of the Direct to Open Model

We describe below a collective model for supporting the open dissemination of MITP frontlist monographs, applying the success criteria and design parameters reviewed above. This section also describes a market segmentation, participation assumptions, provisional collective participation fees, and the projected revenue that those participation and fee assumptions would yield. This exercise helps define the assumptions necessary for the model to generate the revenue MITP requires. The variables have been refined iteratively based on feedback from the Press and from libraries and consortia.

The model is designed to induce support for the D2O offer by balancing and maximizing the dual motivations of the targeted academic libraries: that is, the expression of support for the Press's aligned nonprofit mission, on one hand, and the perceived value of private benefits exclusive to contributing institutions, on the other. The MIT Press is seeking to maximize participation by partnering with member-based library consortia to coordinate collective support for the offer.

The basic terms of the D2O offer include:

- D2O offers two frontlist collections: one comprising social sciences and humanities titles and another comprising STEM and Art/Design titles.²⁰ The frontlist is defined as titles to be published in the calendar year (CY) being opened. For example, the D2O offer for 2022—presented and coordinated in 2021—will cover titles published in 2022. (The collections are described in §4.2.)
- The annual financial support target for each collection will be publicly communicated and positioned as partially covering the direct costs of publishing the titles.

²⁰ A three-collection approach was evaluated but proved untenable given the distribution of titles by subject.

- If a collection's financial target is reached, the Press will open the content; if the target is not reached, the titles in that collection will remain closed.

Using two subcollections avoids an all-or-nothing success threshold by allowing for the possibility of partial success; that is, one collection could be opened and one not opened in any given year.

- To maximize participation, the support fees for each collection will be tiered and set as low as possible relative to the value delivered and the resources of the targeted institutions. The fees are structured to encourage institutions to support both collections.
- Libraries commit to supporting one or both of the subject collections, under the following terms:²¹
 - A library that commits to support a given subject collection frontlist will get term access to that collection's backfile for one year.
 - A library will get backfile access to any collection(s) it commits to support, *even if the collection's revenue target is not met* and the frontlist collection is not opened. However, a library only gets access to the backfile(s) corresponding to the frontlist collection(s) it commits to support.
 - Once a given collection's financial target has been met, any surplus support commitments for that collection will be applied to the second subject collection, assuming that collection's target has not been reached. Support fees can cascade in this way across the collections.
 - If a library commits to support a subject collection that does not reach its revenue target (even after cascading fees are taken into account), the library is released from its fee commitment for that collection. Even though the library is released from its commitment to pay, it would still receive term access to the appropriate backfile(s).
- The offer is largely being presented via library consortia, with a specified time window for institutions to indicate which collections they are willing to support. Given the size and diversity of the target group required to make low participation fees possible, the Press is coordinating participation via regional, membership-based consortia in order to exploit, as far as possible, the social cohesiveness, group dynamics, and communication efficiencies between libraries afforded by such consortia.
- The offer will be repeated annually on a CY basis for each year's frontlist.
- Any surplus contributions after both collections are funded will be credited equitably to participating institutions in the following year's offer.

In the future, the model might also include a collective component targeting individual researchers, relying on society partnerships to communicate the offer.

4.2 Collection Definitions

4.2.1 Frontlist Description

The offer assumes two non-overlapping collections, one covering titles in the humanities and social sciences and the other covering STEM and Art/Design titles. Breaking the Press monographs into two collections afforded several advantages in structuring an open offer:

- The approach lowers the minimum cost of participating, expanding the overall number of institutions able to participate in the open offer. Breaking the monographs into two collections allows the Press to

²¹ We describe participants as libraries for convenience. In practice, other types of organizations might participate in the D2O offer.

attract institutions with relatively less demand and/or ability to pay, as well as institutions with a demand for both collections.

- Multiple collections allow a participation policy whereby the support fees from one collection can cascade to another. Such a policy avoids a single point of failure, increases the chances of both collections being opened, and reinforces the collective ethos of the offer.

The table below shows the average number of new (most recent year) titles by collection for the last five years (2016 – 2020). The table also shows the relative size differences in the collections.

Exhibit 4-1: Collection Sizes, 5-Year average

Collection	New Titles	Size Index
	5-year Avg*	
Humanities & Social Sciences	53	1.48
Art/Design & STEM	36	1.00

*Based on data for 2016 - 2020 from 'Arcadia MITP Title Lists'

MITP Analysis | Fee calc

The Press has indicated that the five-year average accurately reflects the most likely publishing scenario going forward, and we have used the average relative sizes in setting the participation fees for each collection. For calculating the average cost per title from the library perspective, we have also used the average frontlist and backlist counts for 2016 – 2020.

While the average titles per year can be used to characterize the collections generally, the Press will also need to establish a minimum number of new titles for each collection. The table below shows the historic low and high counts for 2016 – 2020.

Exhibit 4-2: Low & High Title Counts by Collection

Minimum Title Count by Collection		
Collection	Title Count*	
	Low	High
SSH	52	73
STEAM	22	32

*Based on 2016 - 2020.

Arcadia MITP Title Lists | Tables

4.2.2 Backfile Access

As described above, guaranteed term access to a collection's backfile provides a powerful inducement for institutions to commit to supporting a frontlist collection. Given the importance of the backfile to the offer's value, we need to assess the extent to which the backfile's value might fade over time as the proportion of gated, licensed titles decreases relative to OA titles.

To avoid confusion with other definitions of frontlist and backlist coverage used by the Press, we use 'frontlist' to indicate titles from the current year, covered by the D2O offer, and use 'D2O backfile' to refer to titles from all other years. In the first year of the open offer, the frontlist includes the most recent complete (prior) year, plus the current year, to increase the initial appeal of participating in the offer.

As of fall 2021, the D2O backfile included 2,500 monograph titles. Assuming an average of 90 new, open monographs being added each year, it would take 13.9 years for open titles to represent a third of the archive's content and 27.8 years for open titles to represent half of the archive's content.²²

The volume of titles is not the only value consideration, of course. The age of titles will also affect the perceived value. To assess the use of titles on the MIT Direct platform by age, we sorted the titles into quartiles by use (see Exhibit 4-3).

Exhibit 4-3: Online Use by Title Age

Title Age	Low	Use Quartile		High
	Q1	Q2	Q3	Q4
<= 5 years old	10%	13%	24%	54%
<= 10 years old	13%	20%	26%	41%
> 10 years old	36%	29%	24%	11%

MIT Direct Usage 2020 | BookUsage

Although use declines as a title ages, many titles continue to see heavy use over time. As Exhibit 4-3 indicates, over half of the titles under five years old experience use in the highest quartile, with almost 80% of the younger titles seeing use in the top two quartiles.

Even if the age range is expanded to include titles up to ten years old, two-thirds of those titles still have use in the two highest quartiles. And for titles greater than ten years old, 35% still have use in the top two quartiles. Now that the D2O model has been implemented, the Press will monitor online usage data to demonstrate the ongoing value of the backfile.

The dilution and use data together suggest that term access to the archived monographs should continue to be a valuable participation benefit for a considerable period of time.

4.3 Fee & Revenue Scenario Modeling

Scenarios under which the Press can reach its revenue target for the D2O offer have been modeled by combining various assumptions about provisional fee levels for each collection and the number of institutions anticipated to commit to support each of the collections.

Although the fee and participation assumptions are interdependent, we have no empirical data that correlates demand to fee levels (e.g., the price elasticity of demand for ebooks). Therefore, for projecting potential revenue for the D2O offer, the model allowed MITP to test price and participation scenarios that use alternative assumptions about fee and participation levels. The scenarios summarized below reflect assumptions that have been reviewed with the Press.²³

Determining collection support fees sufficient to allow the D2O offer to reach the revenue target entails multiple steps and assumptions. Reviewing those steps here will make the fee and revenue projections easier to follow in the sections below. The steps include:

- Determine the total universe of academic institutions—by type, size, and region—that could participate in a collective open offer (§4.3.1);

²² I.e., $((2500 / (1 - 0.33)) - 2500) / 90$ and $((2500 / (1 - 0.5)) - 2500) / 90$

²³ The full analysis includes data that is proprietary and confidential to MITP.

- Estimate the percentage of academic institutions in each segment expected to commit to one or both collections in the open model—that is, their willingness to pay—based on the relative demand for monographs by institution type (§4.3.2);
- Estimate the relative value of each collection based on collection size (§4.4.1);
- Estimate the relative ability-to-pay of each segment based on the median serials budget for each institution type and size (§4.4.2);
- Set provisional fee levels, based on the above assumptions, sufficient to achieve the revenue target (§4.4.3);
- Estimate the distribution of multiple collection sales by institution type (§4.5.1);
- Calculate the weighted average fee (§5.5.3) and total average revenue by institution type (§4.5.4); and
- Project revenue based on the documented market and fee assumptions (§4.5.5).

Using the multiple-step logic outlined above allowed the Press to refine the fee and revenue projections by adjusting each of the underlying assumptions; it also reduced the sensitivity of the revenue projection to any errors in individual assumptions. This was especially important for those assumptions based on experience and intuition rather than empirical market data.

Exhibit 4-4: Academic Library Segmentation

Institution Type & Size	Institution Count	Median Serials Expenditures
AA Institutions, US		
< 5,000	276	\$34,335
5,000 - 9,999	108	\$90,548
> 10,000	114	\$141,655
Total Associate	498	
BA Institutions, US		
< 1,000	222	\$58,743
1,000 - 4,999	330	\$211,256
> 5,000	12	\$336,772
Total BA	564	
MA Institutions, US		
< 1,000	66	\$68,630
1,000 - 4,999	374	\$280,761
5,000 - 9,999	145	\$636,654
10,000 - 19,999	76	\$1,037,696
> 20,000 FTE	23	\$1,580,068
Total MA	684	
PhD Institutions, US		
< 5,000	79	\$336,600
5,000 - 9,999	81	\$1,207,182
10,000 - 19,999	117	\$2,696,082
> 20,000 FTE	141	\$7,449,991
Total PhD	418	
Other Institutions		
Special Focus Institutions, US	208	\$79,500
Total Special Focus, US	208	
RoW Institutions		
PhD, International Anglophone	324	--
PhD, Other International	306	--
Total RoW	630	
Totals, All Institutions	3002	

MITP Analysis | Segmentation-Rev

4.3.1 Institutional Segmentation

Exhibit 4-4 (previous page) shows a segmentation of academic libraries by institution type, size, and median serials budget. The segmentation includes US institutions, doctoral institutions in other Anglophone countries, and other international doctoral institutions.²⁴

The institution count in the exhibit represents the entire universe of academic libraries that the Press might approach with an open offer, *not* a count of the institutions projected to actually participate in the offer; those participation projections are shown in Exhibit 4-5.

4.3.2 Participation Assumptions, All Collections

Exhibit 4-5 shows the percentage and number of institutions in each segment that we have assumed, for modeling purposes, will participate in a D2O offer. The participation assumptions reflect the number of institutions the Press anticipates will commit to supporting at least one collection.

For modeling, the participation percentage for doctoral institutions represents the heuristic assumption necessary, in combination with the provisional D2O fees described below, to generate revenue sufficient to reach the model's annual financial target.

As noted in §3, international sales currently account for approximately 40% of total Press sales. However, the participation assumptions and fees for non-US institutions only result in international revenue that represents about 30% of total D2O revenue (see Exhibit 4-13).

Exhibit 4-5: D2O Participation Assumptions

Institution Type & Size	Institution Count	Participating Institutions	
		%	#
AA Institutions, US			
< 5,000	276	4%	10
5,000 - 9,999	108	4%	4
> 10,000	114	4%	4
Total Associate	498		17
BA Institutions, US			
< 1,000	222	14%	31
1,000 - 4,999	330	14%	46
> 5,000	12	14%	2
Total BA	564		79
MA Institutions, US			
< 1,000	66	11%	7
1,000 - 4,999	374	11%	39
5,000 - 9,999	145	11%	15
10,000 - 19,999	76	11%	8
> 20,000 FTE	23	11%	2
Total MA	684		72
PhD Institutions, US			
< 5,000	79	35%	28
5,000 - 9,999	81	35%	28
10,000 - 19,999	117	35%	41
> 20,000 FTE	141	35%	49
Total PhD	418		146
Other Institutions			
Special Focus Institutions, US	208	12%	25
Total Special Focus, US	208		25
RoW Institutions			
PhD, International Anglophone	324	25%	81
PhD, Other International	306	20%	61
Total RoW	630		142
Totals, All Institutions	3002	16%	482

MITP Analysis | Segmentation-Rev

²⁴ The US segments are based on the 'Carnegie Classification 2018 Basic' and the data is drawn from the Department of Education IPEDS data. The international Anglophone institution data is based on the Ringgold Identify directory.

The participation percentages for other institution types are indexed against doctoral institutions based on current monograph spending and title acquisition patterns by institution type. Exhibit 4-6 shows the indexed monograph spending and volumes acquired by institution type as reported by a recent Ithaka S+R survey of library purchasing patterns for monographs.²⁵ (No data was reported for Associates institutions. The index value for those institutions represents an intuitive assumption.)

Exhibit 4-6: Demand Index by Institution Type

Institution Type	Index	
	Spending	Volumes Acquired
Associates	0.10	0.10
Baccalaureate	0.26	0.40
Special Focus		
Master's	0.19	0.30
Doctoral	1.0	1.00

*Per Daniel, Esposito, and Schonfeld (2019). MITP Analysis | Demand

The index for volumes acquired has been applied against the participation assumption for doctoral institutions. As reflected in Exhibit 4-5, a participation assumption of 35% for doctoral institutions translates into a 14% ($0.35 * 0.40$) participation for baccalaureate institutions and an 11% ($0.35 * 0.30$) participation for master's institutions.

This indexing masks considerable variation in expenditures, usage, and format preferences across institutions, even within libraries of similar types and sizes. However, absent more precise data, it has driven our assumptions about relative demand. This initial participation estimate provided a baseline for evaluating the viability of the D2O collective open model. Going forward, the specific participation assumptions for each segment need to be validated and adjusted based on market feedback and the perspective of the Press's sales team.

As indicated in Exhibit 4-5, the estimated target group comprises approximately 480 institutions, or about 16% of the total universe of institutions. The target group represents institutions of various sizes, types, budgets, and geographic regions. Such a large and diverse target group requires a structured approach to communicating the offer and coordinating participation.

4.4 Provisional Fees

4.4.1 Base Fees

The D2O support fees need to reflect the relative value of each collection, with the most obvious *ex ante* indicator of value being each collection's size, based on the average number of new titles each year.

Exhibit 4-7 shows the average number of new titles per year for each collection, an index value based on the relative collection size, and the fee for the highest fee tier for each collection. As the table indicates, the fee for the HSS collection is 48% higher than that for STEM/Art & Design collection.

²⁵ Ithaka S+R examined single-title book acquisitions at 124 US higher education institutions in fiscal year 2017 and 51 institutions with data on their acquisitions from FY 2014 to 2017. The analysis includes all book types and is not limited to monographs. Daniel, Esposito, and Schonfeld 2019.

In the model, the top fee for the STEM/Art & Design collection (\$2,535) is set to generate revenue sufficient to reach the financial target.

Exhibit 4-7: Year 0, Top Fee by Collection

Collection	New Titles 5-year Avg*	Size Index	Top Fee
Humanities & Social Sciences	53	1.48	\$ 3,745
Art/Design & STEM	36	1.00	\$ 2,535

*Based on data for 2016 - 2020 from 'Arcadia MITP Title Lists'

MITP Analysis | Fee calc

As explained below, the fees for the other institution types are derived from the fee for the highest tier, adjusted to reflect ability-to-pay.

4.4.2 Fee Adjustments for Ability-to-Pay

To set the D2O support fees, we have scaled the fees to reflect the median serials expenditures for each institution type and size (see Exhibit 4-8).

Exhibit 4-8: D2O US Participation Fees by Institution Size, Year 0

Institution Type & Size	A		B	C
	Institution Count	Median Serials Expenditures	Expenditure Relative to Largest Tier	Scaled Relative Value
AA Institutions, US				
< 5,000	276	\$34,335	0.5%	26%
5,000 - 9,999	108	\$90,548	1%	33%
> 10,000	114	\$141,655	2%	37%
Total Associate	498			
BA Institutions, US				
< 1,000	222	\$58,743	0.8%	30%
1,000 - 4,999	330	\$211,256	3%	41%
> 5,000	12	\$336,772	5%	46%
Total BA	564			
MA Institutions, US				
< 1,000	66	\$68,630	0.9%	31%
1,000 - 4,999	374	\$280,761	4%	44%
5,000 - 9,999	145	\$636,654	9%	54%
10,000 - 19,999	76	\$1,037,696	14%	61%
> 20,000 FTE	23	\$1,580,068	21%	68%
Total MA	684			
PhD Institutions, US				
< 5,000	79	\$336,600	5%	46%
5,000 - 9,999	81	\$1,207,182	16%	63%
10,000 - 19,999	117	\$2,696,082	36%	78%
> 20,000 FTE	141	\$7,449,991	100%	100%
Total PhD	418			
Other Institutions				
Special Focus Institutions, US	208	\$79,500	1%	32%
Total Special Focus, US	208			

The median serials expenditure for each tier (Column A) has been calculated as a percentage (Column B) relative to the median expenditure of the institutions with the largest budgets (i.e., doctoral institutions with more than 20,000 FTE).

Using relative serials expenditure (Column B) as a basis for calculating the participation fees for each institution type/size would result in extreme price differences between tiers, which would 1) make it impossible to set fees capable of achieving the revenue target given the fee constraints described above, and 2) raise real and perceived equity issues for libraries within and across institution types.

To reduce this effect, the median serials expenditure percentages have been scaled to provide a more proportional distribution (Column C). The order of scaling in Column C uses an exponent of 4.0 to provide a more even fee distribution. The scaling value was set to yield Collective fees that compared favorably against alternative acquisition channels for all types and sizes of institutions.

4.4.3 Collection Fees

Scaling the fees for each tier to reflect the values in Column C of Exhibit 4-8 yields the fees shown in Exhibit 4-9. The fees are designated as 'Year 0' as they could be adjusted to reflect changes before launch.

4.4.3.1 US D2O Fees

Exhibit 4-9: US Participation Fees by Collection, Year 0

Institution Type & Size	Participation Fee		
	HSS	STEM	Both*
AA Institutions, US			
< 5,000	\$ 975	\$ 660	\$ 1,555
5,000 - 9,999	\$ 1,245	\$ 840	\$ 1,980
> 10,000	\$ 1,390	\$ 940	\$ 2,215
BA Institutions, US			
< 1,000	\$ 1,115	\$ 755	\$ 1,775
1,000 - 4,999	\$ 1,535	\$ 1,040	\$ 2,445
> 5,000	\$ 1,725	\$ 1,170	\$ 2,750
MA Institutions, US			
< 1,000	\$ 1,160	\$ 785	\$ 1,850
1,000 - 4,999	\$ 1,650	\$ 1,115	\$ 2,625
5,000 - 9,999	\$ 2,025	\$ 1,370	\$ 3,225
10,000 - 19,999	\$ 2,290	\$ 1,550	\$ 3,650
> 20,000 FTE	\$ 2,540	\$ 1,720	\$ 4,045
PhD Institutions, US			
< 5,000	\$ 1,725	\$ 1,170	\$ 2,750
5,000 - 9,999	\$ 2,375	\$ 1,610	\$ 3,785
10,000 - 19,999	\$ 2,905	\$ 1,965	\$ 4,625
> 20,000 FTE	\$ 3,745	\$ 2,535	\$ 5,965
Other Institutions			
Special Focus Institutions, US	\$ 1,205	\$ 815	\$ 1,920
Total, US			

4.4.3.2 International D2O Fees

The fees for international Anglophone institutions have been set on a case-by-case basis by 1) mapping the US fees to the institutional bands used by the national consortia in each country and 2) estimating the number of participating institutions in each band. The fees for other international PhD-granting institutions have been simplified into three size tiers for both subject collections.

4.4.3.4 MIT Libraries Match Subsidy

To encourage participation in D2O by smaller and less well-resourced institutions, the MIT Libraries (MITL) have contributed \$100,000 to subsidize their participation in Year 1. We evaluated several strategies for applying the subsidy, and the Press chose an approach that offers a deep discount (26%) for any US non-PhD institution committing to both collections.

Appendix A shows the fee schedule for the MITL Match subsidy for 2022. Were every eligible institution to participate in the first year, the total cost would be \$100,920 (see Appendix B for detail).

4.4.3.4 Equitable D2O Participation Fees

To ensure equitable participation in the open monograph offer, the Press might extend no-cost or discounted fees to countries identified by the Research4Life criteria.²⁶

The Research4Life lists are based on combinations of economic measures for each country:

- Gross National Income and Gross National Income per capita (from the World Bank)
- Human Development Index (from the UN)
- Healthy Life Expectancy (from the World Health Organisation)
- UN Least Developed Countries list

There are 69 countries in Group A, which typically receive full discounts from journal publishers, and 56 countries in Group B, which typically receive a 50% discount from journal publishers.

Using the Research4Life criteria would simplify presentation. At the same time, the program does not cover some countries (e.g., India, Indonesia) that would be unlikely to participate at an undiscounted rate. These countries might be included in a third group covering under-resourced institutions or accommodated by custom discounts.

4.4.4 Participation Fees Relative to Institutional Budgets

In addition to the leverage afforded by the contingent nature of the offer and the inducement provided by term access to the backfile, the value proposition for the D2O offer requires that the cost of participation is low relative to the resources of the organization overall.

There are many demands on library budgets and each institution will have its own basis for assessing the relative value of the D2O offer. Nevertheless, comparing the average estimated cost of the D2O support fees to the median serials budget for each institution provides one indicator of how the fees might be perceived.

To assess this perception for the Press's open offer, we have compared the D2O fee levels as a percentage of the median materials budget for each segment. In most cases, the open offer support fees represent less

²⁶ <https://www.research4life.org/access/eligibility/>

than 1% of the median serials acquisitions budget by institution type and size, and in many cases the fees represent less than 0.5% of the serials budget. (See Appendix C for a full comparison.)

The fees for the smallest AA, BA, and MA institutions represent a higher percentage of the median serials budgets for those institutions (ranging from 2.4% to 3.8%). The Press can reduce these fee tiers slightly so that they represent a smaller percentage of the serials budgets. Such an adjustment would have a minimal impact on total revenue.

4.5 Revenue Projection

Projecting fee revenue for the D2O offer requires taking into account two collections of unequal size/price, different prices by institution type and size, assumptions about the average number of collections supported per institution, and assumptions about multiple-collection discounts. Therefore, to simplify the open offer fee and revenue projection we have based the projection on the weighted average revenue for each institution type. We describe the constituent steps in the revenue projection below.

4.5.1 Average Collections Per-Institution

For purposes of projecting revenue and estimating the average effective discount of committing to multiple collections, we need to make assumptions about the average number of collections supported by institutions of each type. Exhibit 4-10 shows the assumptions used for modeling open offer revenue, based on discussions with the Press.

Exhibit 4-10: Average Collections per Institution

Number of Collections Supported	% of Institutions supporting multiple collections			
	PhD	MA	BA	AA
2	70%	60%	40%	50%
1	30%	40%	60%	50%
	100%	100%	100%	100%
Average collections per institution	1.70	1.60	1.40	1.50

MITP Analysis | Fee calc

The above assumptions can be revised as actual uptake data becomes available.

4.5.2 Multiple Title Discounts

Term access to the backlist depends on an institution supporting the corresponding frontlist collection. That benefit should be sufficient to motivate institutions to commit to support both collections. However, the model allows the Press to test the effect of a multiple collection discount, and the provisional fees described above reflect a 5% discount for institutions supporting both collections.

Based on the collection uptake assumptions summarized in Exhibit 4-10, 62% of institutions would support both collections (see Exhibit 4-11; next page). Assuming a 5% discount for supporting both collections, this would result in an effective average discount of 3.1% (that is, $0.05 * 0.62$). In projecting revenue, the weighted average fee has been discounted by this amount.

Exhibit 4-11: Institutions Committing to Both Collections

Institutions Committing to Both Collections	PhD	MA	BA	AA	Total
Total institutions by type:*	288	97	79	17	482
Total institutions buying both collections:	202	58	32	9	301
% of institutions supporting both collections:					62%

*Special Focus institutions treated as MA institutions for purposes of this analysis.

MITP Analysis | Fee calc

4.5.3 Weighted Average Fee

The scaled weighted average fee has been calculated based on the top fee level (i.e., large PhD institutions) for each collection (see Exhibit 4-9) and the relative demand anticipated for each collection.

Market data indicates that about 60% of academic library book purchases (by volume of titles) are for humanities titles, 27% are for social science titles, and 13% are for STEM titles.²⁷ That purchasing pattern translates into demand for humanities and social science titles being approximately three times that for Art/Design & STEM. Translating the relative demand by discipline into an index allows us to calculate the weighted average fee across both collections, as shown in Exhibit 4-12. Applying a multiple-collection discount, described above, yields the net discounted average weighted fee.

Exhibit 4-12: Weighted Average Fee

Collection	Relative Collection Sales	Collection Fee (PhD)
Humanities & Social Sciences	3.0	\$ 3,745
Art/Design & STEM	1.0	\$ 2,535
Weighted average fee:		\$ 3,443
Discount as a % of weighted average fee:		3.1%
Net discounted weighted average fee:		\$ 3,335

MITP Analysis | Fee calc

Appendix D shows the weighted average fee for each institution type and size, the average number of collections per institution, and the average total fee per institution by institution type and size. (This represents an interim step in calculating the total revenue and is provided for clarity.)

4.5.4 Provisional Revenue Projection

Exhibit 4-13 (next page) shows the total average fee for each institution type and size, the percentage and number of institutions assumed to participate in the offer for each institution segment.

The exhibit indicates how the D2O participation and fee assumptions described above would yield the revenue required to achieve the annual monograph replacement revenue. Again, all the assumptions will need to be reviewed on an ongoing basis—internally at the Press and with client libraries—and revised to ensure that they reflect a realistically achievable objective.

²⁷ From Daniel, Esposito, and Schonfeld 2019, p. 24. The ratios are based on all types of university press books, not just monographs. Books in other disciplines (e.g., medicine, law) have been excluded when calculating the ratios.

Exhibit 4-13: Revenue by Institution Type

Institution Type & Size	Institution Count	Average Total Fee per Institution	Participating Institutions		Revenue
			%	#	%
AA Institutions, US					
< 5,000	276	\$ 1,305	4%	10	0.9%
5,000 - 9,999	108	\$ 1,665	4%	4	0.4%
> 10,000	114	\$ 1,860	4%	4	0.5%
Total Associate	498			17	1.9%
BA Institutions, US					
< 1,000	222	\$ 1,386	14%	31	3.1%
1,000 - 4,999	330	\$ 1,918	14%	46	6.3%
> 5,000	12	\$ 2,156	14%	2	0.3%
Total BA	564			79	9.6%
MA Institutions, US					
< 1,000	66	\$ 1,648	11%	7	0.8%
1,000 - 4,999	374	\$ 2,352	11%	39	6.6%
5,000 - 9,999	145	\$ 2,880	11%	15	3.1%
10,000 - 19,999	76	\$ 3,264	11%	8	1.8%
> 20,000 FTE	23	\$ 3,616	11%	2	0.6%
Total MA	684			72	13.0%
PhD Institutions, US					
< 5,000	79	\$ 2,618	35%	28	5.1%
5,000 - 9,999	81	\$ 3,604	35%	28	7.3%
10,000 - 19,999	117	\$ 4,403	35%	41	12.8%
> 20,000 FTE	141	\$ 5,670	35%	49	19.9%
Total PhD	418			146	45.1%
Other Institutions					
Special Focus Institutions, US	208	\$ 1,712	12%	25	3.1%
Total Special Focus, US	208			25	
RoW Institutions					
PhD, International Anglophone	324	\$ 5,552	25%	81	19.9%
PhD, Other International	306	\$ 4,144	20%	61	10.6%
Total RoW	630			142	33.6%
Totals, All Institutions	3002		16%	482	103%

MITP Analysis | Segmentation-Rev

4.6 Revenue Projection, 2022 – 2026

Exhibit 4-13 reflects a single year's revenue, assuming the participation assumptions described in §4.3.2. To compare the potential performance of D2O against that of current monograph sales channels, we have also:

- Projected the current sales revenue out five years based on the average performance for the 2018 – 2020. This reflects the historical average change in revenue net of any price increases.
- Projected the D2O revenue out five years under various uptake shortfall scenarios.

In practice, we anticipate that it could take two or more D2O offer cycles before the Press achieves sufficient participation to reach the full financial targets for both collections. The D2O spreadsheet model allows us to compare the potential effects of various D2O adoption scenarios against monograph revenue from current channels.

As an example, Exhibit 4-14 shows a gradual D2O adoption scenario—spread over the first three years of the offer—that would effectively breakeven with the revenue projected for current sales channels.

Exhibit 4-14: Example D2O Uptake Scenario (to breakeven)

Example Participation Shortfall Scenario	2022	2023	2024	2025	2026
	60%	75%	90%	100%	100%

MITP Analysis | 5-yr Rev

The D2O spreadsheet model allows MITP to adjust its assumptions about D2O participation by individual institution type (AA, BA, MA, PhD) over each of the first five years after launch (2022 – 2026).

4.7 Shortfall Risk Assessment

The D2O revenue projection considers the revenue implications of a shortfall in participation over an initial five-year planning period. However, we also needed to consider how to manage potential shortfalls in any single year.

Although we consider the assumptions about participation in the D2O offer to be realistic, any offer to academic libraries will take time to gain traction. Indeed, in preliminary discussions, several consortia representatives have indicated that it might take a couple of years to ramp up to full participation in the D2O offer. The risk that one or both collection offers might fail is greatest in the first year that D2O is introduced. Given that risk, we need to assess the potential revenue implications for the Press and identify possible risk mitigation strategies.

If the D2O offer for either collection were to fail in a given year, the titles in those collections would continue to be available via conventional channels and, presumably, continue to generate revenue commensurate with current trends for institutions not committing to the offer. However, a shortfall in participation would potentially depress revenue from institutions that commit to participate in the offer, as institutions that gain access to one or both archives might postpone or forgo the purchase of backlist titles through conventional channels. Moreover, we might logically assume that the libraries that commit to D2O are those that would be most likely to make conventional monograph purchases.

The lack of detailed market data makes it difficult to quantify this revenue exposure with any precision. However, we have tested some logical inferences based on the MITP sales data that is available and informed by real-time participation data. Quantifying this exposure will allow the Press to manage each year’s D2O offer.

Section 5—Prevalent Open Monograph Models

5.1 Context

This section considers D2O in the context of other open monograph models—particularly other new conditional open models that have been introduced over the last two years—and reviews the suitability of those models given the characteristics of various types of scholarly presses.

Driven by mission, the inexorable decline in conventional monograph sales, and funder policies mandating open publication of research monographs,²⁸ many scholarly publishers in the social sciences and humanities have been exploring open models for monographs.

As of October 2019, the Directory of Open Access Books (DOAB) listed almost 42,000 OA titles from 525 publishers.²⁹ While university presses represent about one-quarter of the publishers with OA titles, most of those presses are based in the UK, Europe, or Australia, rather than North America. Larger publishers—with the exception of Palgrave Macmillan and (in STM) Springer Nature—have not pursued OA monograph models as actively as smaller publishers.³⁰ At the same time, new players have entered the market, including new university e-presses, scholar-led presses, and campus-based publishing programs.

5.2 Publisher Characteristics

5.2.1 Costs

Each of these publisher types has its own mission objectives and operating realities in terms of costs and net financial return. The divergence is especially pronounced between established university presses and born-digital initiatives. Typically, North American university presses have higher operating costs than university e-presses, scholar-led initiatives, and other born-digital publishers.³¹

Lower costs allow publishers to adopt business models (such as competitive BPCs or print freemium models) that might not be economically viable for many established presses. To this end, the Sustainable History Monograph Pilot³² seeks to reduce the average cost per-title to expand the open model options available to established presses.

Assessing the financial viability of open monograph models is also complicated by the various types of institutional subsidies and cross-subsidies that mission-driven publishers may apply. The revenue hurdle for any given press's model may reflect some or all of its first-copy costs or (as with MITP) replacement revenue for monograph sales (either before or after subsidies are taken into account). As a result, it is difficult to characterize, in general terms, the financial performance of any given open model as it might be applied to a specific press. A press will need to tailor the model to its specific requirements.

5.2.2 Other Characteristics

As noted above, a publisher's cost structure and financial requirements represent critical parameters for determining the suitability of any given open model. At the same time, other publisher characteristics can also affect the suitability of an open model, especially one predicated on collective behavior.

These characteristics can include:

- the number of frontlist titles to be opened.

²⁸ For example, UK Research and Innovation (UKRI) has indicated that monographs based on scholarship it funds must be freely available within 12-months of publication from January 2024 onwards. See McKie 2021.

²⁹ <https://www.doabooks.org/>.

³⁰ See Newman and Strempel 2018, pp. 20ff.

³¹ For example, Open Book Publishing (<https://www.openbookpublishers.com/section/44/1>) and Punctum Books (<https://punctumbooks.com/>). The Mellon cost study (Maron et al. 2016) of monographs from 20 North American university presses found average costs per title ranging from \$20,000 to more than \$40,000. At the same time, younger OA monograph publishers typically do not carry the high overhead costs of more established university presses. Open Book Publishers, founded in 2008, has reported its average cost per title at about \$10,500 per title.

³² See <https://longleafservices.org/blog/the-sustainable-history-monograph-pilot/>. The initiative currently has 23 participating presses.

Opening all the titles of a large frontlist—the objective of MITP’s open model, which targets 90 – 100 new titles annually—will typically pose more ambitious design and financial hurdles than opening fewer titles or individual titles.

- the size and age of a publisher’s backlist.

Assuming that a publisher’s backlist has not already been opened or widely licensed, it can be used as a private benefit to motivate support for opening the publisher’s frontlist. D2O, Opening the Future, and Fund to Mission (§5.3.4) all use variations of this approach.

- licensing revenue.

Open models can put licensing revenue at risk, especially that derived from inclusion in aggregations. A publisher that generates a material percentage of monograph revenue via licensing royalties will typically require more replacement revenue than one without.

- risk tolerance.

A publisher’s ability and willingness to accept financial risk will often be critical in determining the type of open monograph model to pursue.

5.3 Prevalent OA Models

The models currently used to finance open monographs address the public goods provision issues described above (§3.1) in different ways and with various degrees of effectiveness. As context for considering the potential applicability of D2O for other presses, we review the principal open monograph revenue models below. This overview should also shed light on the competitive environment in which the Press’s D2O offer will operate.

The models described below focus on those that support frontlist monographs in the social sciences, humanities, and STEM. We have excluded non-monograph publications (textbooks, reference works, practitioner guides, etc.) and programs (typically grant-funded) that retrospectively open backlist titles.

Multiple models are used to support open access monographs and many publishers combine elements of several models. As there is no significant benefit to scaling up to a single model, this diversity seems likely to continue. Prevalent open models include:

- Book publishing charges (BPC);
- Collective funding; and
- Private benefits (including value-added editions and additional content).

We will focus our assessment on permutations of the models above as they are most likely to provide a viable approach for most publishers. Other models are sometimes applied to support open monograph titles, including consumer crowdfunding, endowments, and advertising.³³ While these models might be used in combination with one of the principal approaches above or may work for individual titles or small groups of titles, they do not scale to any meaningful extent and, as a result, have not been covered here.³⁴

³³ For a catalogue of models that might be applied to open monographs, see Penier, Eve, and Grady 2018 and Speicher et al. 2018.

³⁴ As examples: An average first-copy cost of \$15,000 per title and a draw-down rate of 4.0% would require endowment principal of \$375,000 *per title*, limiting the approach to the smallest of presses. Similarly, to recover the same first-copy cost using consumer crowdfunding would (at \$50 per donor) require 300 contributors per monograph, making the approach plausible for only very small publishers.

Host institution subsidies (both financial and in-kind) and private and public grants have not been treated separately. While subsidies from a host institution often contribute to funding monographs and reduce the financial burden on market-based open models, such subsidies are integral to the financing of most presses, rather than providing a discrete OA funding model.

5.3.1 Book Publishing Charges

For both commercial and nonprofit publishers, book processing charges appear to be the most prevalent model for supporting individual OA monographs. With established publishers, BPCs are often used as a discretionary OA option to the publisher's conventional market sales approach.

Requesting that authors provide an institutional subsidy, when available, to partially offset the cost of publication has been an established practice for many North American university presses, even under a conventional publishing model. For commercial open monograph publishing programs, book (and, in some cases, chapter) charges to fully or partially offset publication costs are typically treated as mandatory.

As noted above, BPCs reflect the cost structures of individual presses. The costs of BPCs are sometimes based on the length of the manuscript and (less frequently) on the level of editorial support provided by the publisher. Publishing services provided typically include manuscript tracking, copyediting and proofreading, peer review, typesetting, and online hosting. BPCs currently average about \$7,500, with charges ranging widely from \$225 to \$26,000, depending on publisher and type of monograph.³⁵

Similar to journal APCs, BPCs raise issues of equity and access for authors without the financial resources to pay. Although some publishers have waiver or sponsorship programs for authors without the resources to publish, the availability of waivers is not as prevalent as for APCs in journal publishing (although some programs—such as Luminos from the University of California Press—make provisions for funding them). For this reason, some librarians and publishers, including the ScholarLed coalition,³⁶ eschew BPCs as inequitable in terms of author access, as well as expensive and administratively cumbersome.

BPCs can provide an optional OA route that can coexist with a conventional sales model. However, given the relatively high costs per title and the inconsistent funding in the social sciences and humanities, few North American university presses seem likely to adopt mandatory BPCs as a model to open their front lists.

5.3.2 Collective Models

Several initiatives use some form of collective support to open individual titles or groups of titles. These initiatives vary considerably in terms of how they motivate collective support and most combine collective support with BPCs and/or revenue from value-added versions.

³⁵ For data on BPCs by publisher, see the Open APC website (<https://treemaps.intact-project.org/apcdata/bpc/#publisher/>)

³⁶ <https://blog.scholarled.org/>

Several collective initiatives serve multiple publishers. Publishers often use such platforms to supplement their own distribution and business models, although some publishers rely on collaborative models exclusively. Multi-publisher collective programs for new OA monographs include:^{37,38,39}

*Knowledge Unlatched (KU)*⁴⁰— Knowledge Unlatched has evolved to comprise a variety of collective support initiatives for all types of resources. As its basic model, KU uses assurance contracts to open groups of monographs once institutional commitments reach a stipulated support threshold. The support fees typically follow a ‘more-the-merrier’ approach, with higher participation resulting in lower fees. With individual title fees averaging \$40 - \$50, and with 200 – 300 participating libraries per funding cycle, the total revenue generated per title appears consistent with that generated by a BPC model.

While KU supporting institutions receive some exclusive benefits (such as print discounts and a role in curating title offerings and in governance), participation relies primarily on pro-social behavior on the part of supporting libraries. As a result, while over 600 libraries have participated in at least one KU offering, there is considerable variance in participation from year-to-year. KU now administers collective membership models on behalf of other initiatives and publishers, including Language Science Press (LSP) and Open Edition.

*TOME (Toward an Open Monograph Ecosystem)*⁴¹— TOME is a five-year pilot project (running from 2018 to 2022) sponsored by the Association of American Universities, the Association of Research Libraries, and the Association of University Presses.

TOME seeks to cover monograph publishing costs via institutionally funded faculty book subsidies. The institutional subventions seek to value the positive externalities that monographs deliver for credentialing and evaluating faculty (externalities that cannot be captured in the pricing for individual-copy sales).

Participating institutions commit to provide publication subventions of \$15,000 for a basic monograph. The pilot terms initially called for institutions to support three title subventions a year over a five-year commitment, although those terms have been relaxed to attract additional participants. Although over 60 university presses are participating in the initiative, TOME has only attracted the participation of 20 academic institutions thus far.

Single-publisher collective models for OA monographs include:

*Language Science Press*⁴²— Language Science Press is a scholar-led, born-digital publisher of open access monographs in linguistics that aims to publish 30 monographs and edited volumes a year. LSP relies primarily on a collective support model (115 institutions currently support the initiative) supplemented with revenue from print editions. The institutional support is coordinated via Knowledge Unlatched.

³⁷ We have excluded programs for retro-digitized or out-of-print titles (such as the Humanities Open Book project), as well as distribution platforms, such as MUSEOpen (<https://about.muse.jhu.edu/muse/open-access-overview/>) and OAPen (<https://www.oapen.org/>) that are independent of the OA funding model.

³⁸ Open Library of Humanities explored a partnership to publish OA books but does not appear to have published any titles. See <https://www.openlibhums.org/news/220/> and <https://www.infodocket.com/2014/07/02/open-library-of-the-humanities-discussing-partnerships-for-monograph-publishing-pilot-three-publishers/>

³⁹ Because it focuses on reducing costs to facilitate open access, as opposed to open revenue models themselves, we have not included the Sustainable History Monograph Pilot as a discrete open access model.

⁴⁰ <https://www.knowledgeunlatched.org>

⁴¹ <https://www.openmonographs.org/>

⁴² <https://langsci-press.org/about>. For the LSP business model see: <https://zenodo.org/record/1286972#.YRvKJ98pBhE>

*Lever Press*⁴³—Lever Press is a partnership of Amherst College Press and Michigan Publishing. It draws support from 66 supporting institutions, with heavy representation by Oberlin Group institutions. Lever’s membership fees are based on an institution’s materials expenditure and range from \$500 to \$12,000 per year. Lever has 13 titles in DOAB published between 2019 – 2021.

*Luminos*⁴⁴—The open monograph channel for the University of California Press, Luminos combines institutional membership with reduced BPCs to support open publication. Luminos currently has 30 supporting libraries paying annual fees ranging from \$1,000 to \$20,000 (although the majority appear to pay less than \$5,000 per year). Although affiliated authors from member institutions receive discounts (ranging from 10% to 30%) on the \$7,500 BPC, most of the fee represents a voluntary contribution.

Other initiatives also use a membership component, often combining a mission-based appeal with some form of private benefit, to generate institutional revenue for OA monographs. The private benefits can include discounted support fees, MARC records, value-added editions, and/or some level of governance input.⁴⁵

5.3.3 Versioning & Freemium Models

As described above (§3.1), open models often provide private benefits to contributors to motivate support. This often takes the form of versioning or ‘freemium’ models, where a basic version is openly available and subsidized by fees from value-added editions. The National Academies Press and OECD represent well-established examples of freemium models, making HTML and/or PDF versions available for free with print and value-added digital editions available for a fee. While some versioning models rely on embargoes, most libraries define open access as requiring immediate access. As a result, we do not consider embargo models here.

In the context of OA monographs, print-freemium and value-added digital editions probably represent the most common form of private benefit. For a freemium model to fully sustain open monographs, the market revenue from a print edition or enhanced-digital version needs to be sufficient to cover both first-copy costs and the marginal costs of the value-added version. Even when they are insufficient in themselves, freemium models can represent one component of an open monograph model.

The extent to which freemium approaches generate adequate revenue depends largely on the publisher’s cost structure and on the extent to which the open version provides an adequate substitute for the print edition. Although a print-freemium model is sensitive to changing library attitudes towards print holdings,⁴⁶ consumer print sales might remain largely unaffected.

5.3.4 Incentivized Collectives

D2O combines private benefits with an element of collective behavior, as do two other recent models, “Opening the Future”⁴⁷ and “Fund to Mission.”⁴⁸ These models are sometimes referred to as “Subscribe to Open”-type models because they provide an economic incentive to motivate libraries to participate in the offer and support the resource. However, unlike Subscribe to Open, these open monograph models

⁴³ <https://www.leverpress.org/>

⁴⁴ <https://www.luminosoa.org/>

⁴⁵ See, for example, the membership program of Open Book Publishers (<https://www.openbookpublishers.com>).

⁴⁶ See, for example, <https://against-the-grain.com/2019/10/v314-assessing-print-acquisitions-at-umn-libraries/>

⁴⁷ <https://www.openingthefuture.net/>

⁴⁸ <https://www.publishing.umich.edu/features/fund-to-mission>

do not target established subscriber bases that have demonstrated their ability and willingness to pay for the content being flipped to OA.⁴⁹ That difference requires the conditional open monograph models to set appropriate support fees and identify the institutions willing to support the offer, which may increase uncertainty and risk for some publishers. For convenience, and to differentiate the new models from Subscribe to Open, we refer to the new models as “incentivized collective” models.

As these models are new and being actively reviewed by libraries (and by other presses), we summarize them below and compare their design logic. All three offers represent pilots and experiments and each may be adjusted based on the results of the initial offer cycles.

5.3.4.1 Model Summaries⁵⁰

Fund to Mission —

Fund to Mission (FtM) is an experimental initiative of the University of Michigan Press (UMP) that seeks to open at least 75% of Michigan’s frontlist monographs by the end of 2023. To this end, the initiative intends to raise \$950,000 annually from three sources: from collective support from academic libraries (\$250,000), from funder contributions (\$300,000), and from an increased subsidy from its host institution (\$400,000).

Initially, the library contribution will be generated by upfront purchases of a “Transitional Collection,” comprising the 2021 – 2023 frontlists and/or by single-year purchases of the frontlist. (Single-year fees for 2021 range from \$715 to \$6,000, depending on institution size and type.) Going forward, libraries will continue to contribute by supporting the annual frontlist collection at the same fee level (adjusted over time for cost increases).

Purchasing libraries will gain perpetual access to the frontlist titles and term access to the Press’s backlist (around 1,500 titles) through 2023. Depending on the funding from the host institution and the frontlist collection revenue generated in a given year, some percentage of approximately 80 frontlist titles will be made available OA.

Opening the Future —

Opening the Future (OtF),⁵¹ developed by the Central European University Press (CEUP), uses revenue from backlist subscriptions to cross-subsidize the opening of some or all of about 25 frontlist titles.⁵² Under OtF, libraries subscribe to one or more of four subject backlist collections of 50 titles each. The basis for the title selection varies by collection. Some are based on subject area (history, political science) and others on the curation approach (publisher, library-selected).

There are three price tiers by institution type, with U.S. prices per collection of \$425 (associate), \$950 (bachelors and masters), and \$1,425 (doctoral) per year for a minimum three-year term. The subscription fee guarantees a library access to a collection’s 50 backlist titles for three years and, at the end of that term, a perpetual license to the content.⁵³ Upon renewing for a second

⁴⁹ The MIT and Michigan presses each have ebook collections that have their own customer bases; however, these are not as well established or stable over time as the subscriber bases for most journals.

⁵⁰ Charles Watkinson of UMP and Frances Pinter of CEUP generously reviewed the summaries of the FtM and OtF models, respectively. While they have corrected and refined the descriptions here, they are not responsible for any errors that remain. All the conditional open models continue to evolve, and each publisher’s web site remains the best source of information.

⁵¹ See <https://www.openingthefuture.net/about> and <https://eve.gd/2020/10/22/backlist-to-the-future-a-new-business-model-for-university-presses-and-open-access-books/>.

⁵² The model is also being implemented by Liverpool University Press, see: <https://lup.openingthefuture.net/>

⁵³ <https://ceup.openingthefuture.net/FAQ/#section3.5>

three-year term, a library would gain access to a new set of 50 backlist titles, under the same terms as the initial subscription.

CEUP makes individual frontlist monographs available OA, with one title released for every €8,000 in revenue (roughly equivalent to CEUP's BPC). As of August 2021, CEUP had opened five titles of the 2021 frontlist.⁵⁴

Direct to Open—

D2O offers two frontlist collections: one for social sciences and humanities titles and another for STEM and Art/Design titles. If a collection's financial target is reached, MITP will open the content; if the target is not reached, the titles in that collection will remain closed. Libraries that commit to support a subject collection frontlist will get term access to that collection's backfile for a year. A library will get backfile access to the collection(s) it commits to support, even if the collection's revenue target is not met and the frontlist collection is not opened (see §4.2 for a fuller summary).

The annual financial support target for each collection will be publicly communicated and positioned as partially covering the direct costs of publishing the titles. The support fees are tiered based on institution type, size, and budget, with fees for U.S. institutions for both collections ranging from \$1,555 (small associate) to \$5,965 (large doctoral).

Once a given collection's financial target has been met, any surplus support commitments for that collection will be applied to the second subject collection. If a library commits to support a subject collection that does not reach its revenue target (even after cascading fees are taken into account), the library is released from its fee commitment for that collection. Even though the library is released from its commitment to pay, it would still receive term access to the appropriate backfile(s).

The offer will be repeated annually for each year's frontlist. Any surplus contributions after both collections are funded would be credited equitably to participating institutions in the following year's offer.

All three models continue to publish print editions (except for multimedia titles), primarily for sales to individual researchers, and each publisher's expectations in terms of print edition revenue are incorporated into their financial model.

While similar in some respects, these "incentivized collective" models differ in significant respects. To identify similarities and differences, we have described key aspects of each initiative below.⁵⁵

5.3.4.2 Long-term Stability

While all three of the initiatives above provide access to the backfile as an inducement to participate, that access is structured in different ways and the longevity of the backfile's value as an inducement varies.

Given the size of the MITP backlist (2,500 titles)⁵⁶ and about 90 new OA titles per year, it will take almost 14 years before open titles represent one-third of the total and almost 28 years before open titles represent half of the backlist.⁵⁷ Moreover, the online use of the backlist titles remains strong even as the titles age

⁵⁴ <https://ceup.openingthefuture.net/forthcoming/>

⁵⁵ As we have no information on whether the financial targets for OtF and FtM are based on cost recovery or replacement revenue, we have not commented on pricing or revenue targets.

⁵⁶ This represents an updated backlist title count and supersedes that described in §4.2.2.

⁵⁷ I.e., $((2500 / (1 - 0.33)) - 2500) / 90$ and $((2500 / (1 - 0.5)) - 2500) / 90$

(see §4.2.2). D2O does not provide access to the frontlist titles unless participation is sufficient to reach the offer's financial target. This approach allows MITP to revert to a conventional individual title and ebook collection sales model in any year the D2O offer does not succeed.

Michigan's FtM is predicated on library support for frontlist collections with term access to the backlist as an added inducement. For Michigan's offer, assuming a backlist of 1,500 titles and 80 new OA titles per year, it would take almost ten years before open titles represent one-third of the total and almost 20 years for open titles to represent half of that press's backlist.

Providing supporters access to the frontlist titles that are not available OA significantly increases the initial appeal of the FtM offer. However, the offer's structure has potential implications for its mid- and long-term stability. FtM assumes that libraries will continue to support the frontlist collection even as the amount of open frontlist content increases (and the exclusive value of the content decreases proportionately). If they do not—that is, if libraries evaluate the offer as a market transaction rather than as a collective action—then one might expect them to cease supporting the frontlist collection or to seek reduced frontlist fees that only reflect the value of the restricted titles. In either case, as FtM treats the backlist access as an adjunct to the frontlist offer, there is some risk that access to the backlist would be devalued along with the frontlist. This risk increases the importance of collective behavior on the part of FtM supporters.

CEUP's OtF backlist offer provides access to a collection backlist for an initial three-year term, followed by a perpetual license. CEUP has a backlist of about 450 titles. Assuming, for simplicity, that the backlist titles are distributed equally across the offer's four collections, it would take a library just over two subscription cycles (the initial offer plus one renewal or about six years) to gain perpetual access to all the backlist titles for a collection. At that point, any institution-specific backfile benefit to participating would end.⁵⁸ As with Michigan's FtM, the offer's continued success requires that the initial benefits attract participation and establish an enduring pro-collective inertia.

5.3.4.3 Collective Behavior

While all three of the models have collective components to their offers, the importance of explicit collective behavior varies significantly.

For D2O, the collective component takes two forms: 1) support fees cascade across the collections (once the financial target for one collection has been reached, any surplus commitments cascade to the other collection), increasing the likelihood that both collections will be opened; and 2) the support fees for the collections will be reduced in the event of higher than projected participation, applying a 'more-the-merrier' collective pricing approach. (OtF has a similar fee-reduction policy.) These elements of the offer deliver benefits of passive group participation without requiring altruistic behavior in order for the offer to succeed.

While the market value of the participation incentives for all three models declines over time, the rate at which that value erodes varies considerably between the offers. As noted above, in the case of D2O, it will take almost 13 years for the exclusive value of the backlist to decrease by one-third.

For FtM and OtF, as we understand them, the market value of the participation incentives might be expected to decline substantially, even in the mid-term. As suggested above, mitigating this risk requires that the offers motivate libraries to adopt a community perspective, rather than act solely in their local self-interest. Relying on collective behavior in this way is not a weakness of the FtM and OtF models. Indeed, that aspect of the offers will appeal to many pro-open academic libraries. At the same time,

⁵⁸ <https://eve.gd/2020/10/22/backlist-to-the-future-a-new-business-model-for-university-presses-and-open-access-books/>.

however, those models will require ongoing collective coordination in order to maintain participation and remain stable over time.

5.3.4.4 Contingent OA

The Michigan and CEUP offers provide for individual titles to be opened based on the level of funding support realized. This allows some titles to be opened regardless of the total level of funding support. The selection criteria each publisher intends to apply in selecting titles to be opened does not appear to be explicitly stipulated.

A design specification for MITP's open monograph model called for the ability to open all or a large proportion of the Press's monographs. As a result, D2O was not designed to open titles one at a time. As noted above, relying on an all-or-nothing approach to opening a collection's titles allows MITP to revert to a conventional sales model in any year the D2O offer does not succeed. Moreover, as a practical matter, experience suggests that opening titles individually (or in smaller, overlapping collections) would raise library questions and expectations about the selection of titles.

The original design parameters notwithstanding, D2O can be modified to allow smaller success thresholds without abandoning the participation leverage afforded by conditional provision. This could be achieved by increasing the number of subject collections. (The original design of D2O hoped to offer three or more collections. However, multiple collections posed offer administration challenges.) The D2O cascading funds policy would still operate across collections.

Section 6—Summary

The feasibility assessment summarized in this report describes the support fee and offer uptake assumptions necessary for the D2O open monograph model to be financially viable. The analyses suggest that D2O satisfies the design criteria established for the model and can be implemented with an acceptable amount of risk.

At the same time, D2O is being introduced into a library market experiencing significant budget retrenchment that makes it difficult to add any new serial commitments and that increasingly deprioritizes monograph purchases. This environment poses significant challenges for existing sales models, and innovative open approaches face even greater hurdles to understanding and acceptance. In this context, the success of D2O and other open monograph models will largely depend on academic libraries acting with enlightened self-interest to pursue collective support approaches that provide viable alternatives to conventional market models.

Appendix A: MIT Libraries subsidy-Match Participation Fees

MITL Match Participation Fees

Eligible Institutions	Collection		Fee for Both Collections, MITL Match
	SSH	STEAM	
AA Institutions, US			
< 5,000	\$ 975	\$ 660	\$ 1,210
5,000 - 9,999	\$ 1,245	\$ 840	\$ 1,545
> 10,000	\$ 1,390	\$ 940	\$ 1,725
BA Institutions, US			
< 1,000	\$ 1,115	\$ 755	\$ 1,385
1,000 - 4,999	\$ 1,535	\$ 1,040	\$ 1,905
> 5,000	\$ 1,725	\$ 1,170	\$ 2,140
MA Institutions, US			
< 1,000	\$ 1,160	\$ 785	\$ 1,440
1,000 - 4,999	\$ 1,650	\$ 1,115	\$ 2,045
5,000 - 9,999	\$ 2,025	\$ 1,370	\$ 2,510
10,000 - 19,999	\$ 2,290	\$ 1,550	\$ 2,840
> 20,000 FTE	\$ 2,540	\$ 1,720	\$ 3,150
Other Institutions			
Special Focus Institutions, US	\$ 1,205	\$ 815	\$ 1,495

MITL Incentive Analysis | Fee Sheet

Appendix B: MITL Match Subsidy Detail

Eligible Institutions	Collection		Participating Institutions	Fee for Both Collections with MITL Match	Grant Expended		
	SSH	STEAM			Per Institution	Total \$	Total %
AA Institutions, US							
< 5,000	\$ 975	\$ 660	10	\$ 1,210	\$ 345	\$ 3,334	3.3%
5,000 - 9,999	\$ 1,245	\$ 840	4	\$ 1,543	\$ 437	\$ 1,652	1.7%
> 10,000	\$ 1,390	\$ 940	4	\$ 1,724	\$ 491	\$ 1,958	2.0%
BA Institutions, US							
< 1,000	\$ 1,115	\$ 755	31	\$ 1,384	\$ 391	\$ 12,158	12.2%
1,000 - 4,999	\$ 1,535	\$ 1,040	46	\$ 1,906	\$ 540	\$ 24,925	24.9%
> 5,000	\$ 1,725	\$ 1,170	2	\$ 2,142	\$ 608	\$ 1,021	1.0%
MA Institutions, US							
< 1,000	\$ 1,160	\$ 785	7	\$ 1,439	\$ 411	\$ 2,846	2.8%
1,000 - 4,999	\$ 1,650	\$ 1,115	39	\$ 2,046	\$ 579	\$ 22,733	22.7%
5,000 - 9,999	\$ 2,025	\$ 1,370	15	\$ 2,512	\$ 713	\$ 10,851	10.9%
10,000 - 19,999	\$ 2,290	\$ 1,550	8	\$ 2,842	\$ 808	\$ 6,451	6.5%
> 20,000 FTE	\$ 2,540	\$ 1,720	2	\$ 3,152	\$ 893	\$ 2,156	2.2%
PhD Institutions, US							
Other Institutions							
Special Focus Institutions, US	\$ 1,205	\$ 815	25	\$ 1,495	\$ 425	\$ 10,834	10.8%
Institutions covered:				194	Total expended: \$ 100,920		

Appendix C: Total D2O Offer Fee as Percentage of Serials Budget

Total D2O Fee as % of Serials Budget, by Institution Type

Institution Type & Size	Total Fee as % of Serials Budget
AA Institutions, US	
< 5,000	3.80%
5,000 - 9,999	1.84%
> 10,000	1.31%
BA Institutions, US	
< 1,000	2.36%
1,000 - 4,999	0.91%
> 5,000	0.64%
MA Institutions, US	
< 1,000	2.40%
1,000 - 4,999	0.84%
5,000 - 9,999	0.45%
10,000 - 19,999	0.31%
> 20,000 FTE	0.23%
PhD Institutions, US	
< 5,000	0.78%
5,000 - 9,999	0.30%
10,000 - 19,999	0.16%
> 20,000 FTE	0.08%
Other Institutions	
Special Focus Institutions, US	2.15%

Appendix D: Average Fee by Institution Type

Weighted Average Fee & Total Average Fee by Institution Type

Institution Type & Size	Scaled Weighted Avg Fee	Average Collections per Institution	Average Total Fee per Institution
AA Institutions, US			
< 5,000	\$ 870	1.50	\$ 1,305
5,000 - 9,999	\$ 1,110	1.50	\$ 1,665
> 10,000	\$ 1,240	1.50	\$ 1,860
BA Institutions, US			
< 1,000	\$ 990	1.40	\$ 1,386
1,000 - 4,999	\$ 1,370	1.40	\$ 1,918
> 5,000	\$ 1,540	1.40	\$ 2,156
MA Institutions, US			
< 1,000	\$ 1,030	1.60	\$ 1,648
1,000 - 4,999	\$ 1,470	1.60	\$ 2,352
5,000 - 9,999	\$ 1,800	1.60	\$ 2,880
10,000 - 19,999	\$ 2,040	1.60	\$ 3,264
> 20,000 FTE	\$ 2,260	1.60	\$ 3,616
PhD Institutions, US			
< 5,000	\$ 1,540	1.70	\$ 2,618
5,000 - 9,999	\$ 2,120	1.70	\$ 3,604
10,000 - 19,999	\$ 2,590	1.70	\$ 4,403
> 20,000 FTE	\$ 3,335	1.70	\$ 5,670
Other Institutions			
Special Focus Institutions, US	\$ 1,070	1.60	\$ 1,712
RoW Institutions*			
PhD, International Anglophone*	\$ 3,470	1.60	\$ 5,552
PhD, Other International	\$ 2,590	1.60	\$ 4,144

MITP Analysis | Segmentation-Rev

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