



CASE STUDY

Promoting Student Success

Using Pay for Success to Improve Student Attainment in Higher Education

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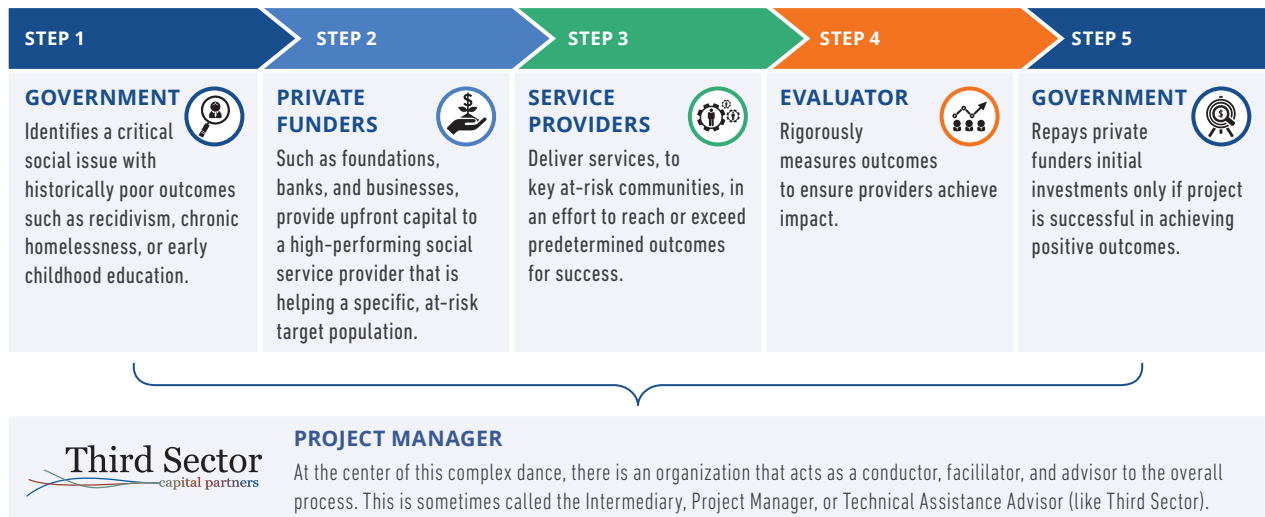
Executive Summary

Higher education is undergoing an important transition. Longer-term metrics such as persistence, graduation, and labor market outcomes, rather than student enrollment or other interim measures, are increasingly driving the conversation about how we structure and pay for post-secondary education.

Pay for Success (PFS) is a mechanism deployed in other policy areas to facilitate the shift to an outcomes orientation that may hold promise in accelerating this transition in higher education. Working with uAspire, a national provider of college affordability and financial aid counseling serving primarily low-income and first-generation students, Third Sector Capital Partners, Inc. (Third Sector) recently completed a PFS feasibility assessment designed to evaluate the appropriateness of PFS for higher education, with a focus on improving student matriculation, persistence, and ultimately graduation. We conducted interviews with almost two dozen stakeholders across a diverse set of organizations to develop a preliminary assessment of PFS in higher education. Our analysis was anchored by an initial focus on text-based student support services offered by uAspire¹; however, this work was designed to generate lessons that are broadly applicable to other types of interventions or programs in the college access and success field. This case study attempts to distill those lessons for stakeholders interested in exploring how PFS may hold promise for achieving better outcomes for students pursuing post-secondary education.

The diagram below maps out the project parties and their roles in a typical PFS project. In the higher education context, a range of higher education institutions (such as a community college) might play the role of the government end payer² in a potential project. In this executive summary, we lay out our findings and recommendations addressing such questions. The body of this case study includes additional details regarding the process for assessing the feasibility of PFS projects in higher education.

PAY FOR SUCCESS MECHANICS



Determinations About PFS in Higher Education

Our analysis determined that there is a clear pathway for PFS to improve student outcomes through college access and student support services delivered prior to and/or during enrollment in higher education; however, there are several gaps and areas of uncertainty to be addressed prior to bringing a successful PFS project to fruition.

We break down our findings into four areas:

Research Evidence and Program Design

The presence of rigorous research supporting the effectiveness of an intervention is a critical foundational piece for any PFS project. A growing body of research evidence demonstrates the effectiveness of the text-based services provided by uAspire and other organizations on enrollment and persistence, as well as a broad range of other student support services.^{3,4,5} However, it is important to be clear about the specifics of each program, how students are referred to the program, and how the research evidence aligns with the expected design of a PFS project with a higher education institution (HEI), group of HEIs, or other set of project end payers. A slight variation in how a service is delivered could call into question the applicability of the studies performed to date. Additionally, the availability of robust HEI data systems and HEI willingness or ability to share student data across departments or with service providers is highly contingent on the individual institution. So, even if the intervention matches the research evidence, it may be challenging to share outcomes as part of a PFS project given HEI data sharing limitations.

Net Financial Benefits

PFS is most desirable in situations where the cost savings and financial benefits derived from program outcomes significantly exceed the cost of delivering services. Our financial analysis demonstrates that text-based and other relatively low-cost interventions pass this critical PFS hurdle. The cost of program services is significantly lower than the direct financial benefit to HEIs from matriculation and persistence and far lower than the direct financial benefit plus the more diffused financial benefit/social benefit that accrues at the system level (i.e. graduation and the benefits that result from a more educated and skilled labor force). These conclusions are robust to different provider cost structures, given the number of students we anticipate would be included. A critical challenge, however, is determining a mechanism for valuing these more diffuse benefits, a struggle that is common to PFS projects across a range of issue areas. Although some outcomes-based funding formulas for HEIs⁶ do attach financial incentives to graduation, the mechanism for quantifying the system-level impact of this attainment is more challenging.

Potential PFS End Payers

There are a range of public entities that could serve as an end payer for a PFS project focused on college access and success services: a high school or school system interested in post-secondary achievement of their graduates, a single community college or multiple such institutions, a public four-year college and its “feeder” community colleges, a state-wide higher education system, or a government entity interested in workforce and/or economic development. Similarly, there are a range of financial benefits that might prompt such an entity to serve as an end payer. The most direct and quantifiable impact of increased student matriculation and persistence accrue to individual HEIs, given how closely linked these measures are with the finances of the institution (primarily through tuition revenue). As such, we focused our efforts on exploring the perspectives and willingness to partner among a diverse sample of such institutions. Our interviews with HEIs in Massachusetts, and other institutions operating in the space, revealed pockets of strong HEI interest in leveraging uAspire and similar interventions to increase matriculation and persistence. However, HEIs demonstrated a wide variety of needs and perspectives relevant to Pay for Success contracting; while institutions understood the value that these services could provide, most institutions presented a specific set of challenges to realizing this value proposition. Additionally, while individual institutions have a very real incentive to pursue PFS given the immediate and tangible impact on enrollment and outcomes-based funding streams, the most dramatic economic benefits of the interventions relate to having a better-prepared, higher-earning workforce and thus accrue at a system-wide level. It is often challenging to find a single government entity that is willing to pay for such diffused benefits.

Potential Project Funders

In a full-scale PFS project, successful project launch is contingent on the availability of upfront funding to cover the timing gap between the provision of services and the attainment of outcomes. Several philanthropic institutions indicated a clear interest in funding Pay for Success projects focused on supporting disadvantaged students in their pursuit of post-secondary attainment. The favorable economics of such a potential project, with the ability to impact a large number of students with relatively low cost, make for a highly “investable” project, including for commercial and/or impact lenders who might provide upfront project funding. Bringing a potential project to fruition, however, will require deep engagement with potential funders and broad consensus on a variety of different terms and conditions, including outcomes selection, an evaluation plan, and success payment mechanics.

Recommendations for Pursuing PFS in Higher Education

While each of the challenges outlined above must be addressed in turn to bring a successful PFS project to fruition, certain issues are more critical to address at this early juncture. From our perspective, the most important of these challenges to be addressed by stakeholders pursuing PFS are the identification of project end payers (government entities willing to pay for outcomes) and developing research evidence specific to how services would be delivered in the PFS project. Successfully addressing these will likely help solve the remaining challenges our assessment identified.

We developed three specific recommendations for organizations interested in exploring PFS as a method for improving long-term outcomes in higher education for disadvantaged students:

Identify jurisdictions ready for Pay for Success: Our analysis determined that the state-level policy context and existing relationships matter tremendously in leveraging PFS to scale in higher education and imply a strategy that targets jurisdictions that provide favorable state and system-level oversight and financial incentives for HEIs to value matriculation, persistence, and graduation. Identifying these jurisdictions, and then working to develop PFS pilot projects in these areas, is a pathway forward for exploring PFS in higher education. Our hypothesis is that the ideal project actually includes multiple end payers, involving a consortium of entities at different levels of government, anchored by a state or system-level institution with strong oversight and centralized decision-making that also has a robust outcomes-based funding formula. Through a robust engagement process, providers and funders can determine with a greater degree of certainty those jurisdictions that provide these favorable conditions.

Develop actionable insights for potential PFS stakeholders: Given capacity constraints for HEIs themselves, we also recommend a process of developing data sharing and financial valuation tools for use by HEIs to develop the institutional capacity to pursue PFS in conjunction with other stakeholders. This was driven by two insights from our discussions with HEIs: There was no clear consensus on the permissible level of data sharing within an institution or between it and other entities, and the ability to share outcomes data and track participants across organizations is a clear prerequisite for PFS. Secondly, colleges and universities lack the expertise to conduct a full-cost accounting of how the various factors related to matriculation, persistence, and graduation affect their bottom line, in contrast to efforts in the private sector to develop detailed cost estimates around key performance indicators such as customer churn. Developing these insights and stakeholder tools also serves as an additional value-add for pursuing PFS for such institutions given the utility of this capacity building for accomplishing other institutional goals.

Conduct PFS pilot projects: Testing Pay for Success in higher education through the development of initial pilot PFS projects allows stakeholders to test operational models and develop proof points to accelerate the engagement process with potential project parties. As noted above, the economics of PFS in higher education appear highly favorable. However, it may be difficult to attract market-rate return-seeking capital without significant philanthropic dollars at this early juncture. A set of philanthropically-funded PFS pilots would help to develop the evidence base for these interventions and project models and allow the field to iterate on and refine what works in practice for higher education PFS.

There is clear opportunity for PFS to enable the expansion of college access and success services and support stakeholders in their pursuit of better outcomes for at-risk students. Our hope is that this case study provides practitioners with a starting point for exploring this opportunity in practice.

Promoting Student Success: Pay for Success in Higher Education

Higher education, along with many other portions of the social sector, is undergoing a transformative shift. Stakeholders across a range of constituencies are increasingly demanding a focus on long-term student outcomes as they assess the effectiveness of post-secondary education. The results that students actually achieve once they have begun the higher education journey, particularly for certain groups of students such as low-income and first-generation students who face additional barriers to post-secondary attainment, have become the primary focus in measuring results.

Pay for Success (PFS) is one possible mechanism to help higher education achieve better student outcomes. PFS projects are about measurably improving the lives of people in need by utilizing an innovative contracting model where government or another entity pays for social programs, in whole or in part, only when specific agreed-upon outcomes are achieved by a service provider. PFS contracts are designed to track the effectiveness of a program over time to ensure that funding is directed toward programs that work.

Working with uAspire, a national provider of college affordability and financial aid counseling serving primarily low-income and first-generation students, Third Sector Capital Partners, Inc. (Third Sector) recently completed a PFS feasibility assessment designed to assess the appropriateness of PFS for higher education, with a focus on improving student matriculation, persistence, and ultimately graduation.

The purpose of this paper is to bring some of the lessons that emerged from the PFS feasibility assessment process to the broader stakeholder community. It is designed to serve as a reference guide for stakeholders funding innovative efforts in higher education and/or those with some familiarity as to how PFS can help improve outcomes who may not have considered the alignment between PFS and the higher education sector. Service providers may also utilize this paper as a helpful guide as they look to explore whether PFS can serve as a vehicle for scaling the impact of their services.

Our analysis determined that PFS shows clear promise as a mechanism for achieving better post-secondary outcomes for students. The hope is that distilling some of the lessons learned from the PFS feasibility assessment process can guide the broader stakeholder community in understanding how PFS can be leveraged to accomplish this goal.

Underlying Trends Highlighting the Need to Explore PFS in Higher Education

Three macro-level trends lent urgency to our work and reinforced the need to disseminate our findings to the broader stakeholder community:

Increasing labor market requirements for post-secondary education

Supporting low-income, first-generation, and students with other barriers in their pursuit of post-secondary education is critically important in an era with a broad wage gap based on post-secondary educational attainment.

- *By 2020, projections indicate that 65% of jobs will require some amount of post-secondary education, up from 59% in 2010.⁷*
- *The fastest growing occupational categories, such as healthcare and STEM (science, technology, engineering, and mathematics) careers, require high levels of post-secondary education.⁸*
- *Recent studies indicate that among students entering college, completing an associate's degree increases earnings between \$4,640–\$7,160 annually. Certificate completion also demonstrates a significant wage premium in the labor market, as do bachelor's and advanced degrees.⁹*

Proliferation of providers and funders tackling post-secondary challenges

A critical mass of high-performing non-profits are engaged in efforts to ensure education continues to be an effective mechanism for economic mobility by focusing on improving student post-secondary outcomes.

- *Non-profit organizations such as uAspire, College Forward, Bottom Line, BridgeEdu, College Advising Corps, and College Possible have demonstrated meaningful results in addressing the persistent challenges to post-secondary attainment faced by underserved and at-risk student groups.*
- *These organizations have developed strong track records of engaging similar student groups and helping them navigate a pathway to and through college.*
- *These non-profit organizations care first and foremost about their mission of furthering the post-secondary goals of low-income and first-generation college. Competitive advantage is not a primary consideration and these organizations are eager to work together to achieve their common mission.*
- *Funders and the broader stakeholder community have recognized the need to attain better outcomes in higher education and have continued to support effective non-profits operating in the space.*

Transition to outcomes-based funding in higher education

Funding formulas for many public colleges and universities now tie a portion of state funding to achievement of specific outcomes (such as degree completion) and are increasing the portion of funds allocated through these mechanisms.

- *More than two-thirds of states use or will soon implement outcomes-based funding models for two-year, four-year, and/or technical colleges.¹⁰*
 - *The amount of funding at stake under these models continues to increase. Ohio, for example, uses an outcomes-based funding formula to allocate 100% of community college funding and 80% at four-year institutions.¹¹*
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Assessing the Feasibility of Post-Secondary Pay for Success

The PFS Feasibility Assessment Process

Prior to assembling the building blocks of a successful PFS project, an initial assessment of the suitability of a particular program or issue area is required. Doing so allows stakeholders to identify key gaps or challenges to a successful project and to assess whether those challenges are surmountable. Each PFS project goes through this process, in some form or another.

This process of assessing the feasibility of PFS involves evaluation on five critical criteria and answering key diligence questions within each:

PFS FEASIBILITY CRITERIA AND DILIGENCE QUESTIONS

	PFS FEASIBILITY PROJECT CRITERIA	DILIGENCE QUESTIONS
	Beneficiary Population <i>Clearly defined high-risk population and eligibility standards to enroll, serve and measure impact</i>	<ul style="list-style-type: none"> • What is the population that could benefit from receiving services? • How are they currently referred to the program?
	Intervention <i>Intervention design with high degree of operational effectiveness</i>	<ul style="list-style-type: none"> • What is the intervention? • How is it delivered to program participants?
	Provider Impact <i>Provider with strong track record of impact and focus on high-bar outcomes</i>	<ul style="list-style-type: none"> • What outcome(s) can the intervention feasibly deliver? • What is the current state of research evidence about the impact of the intervention on the outcome(s) of interest? • Is there evidence of impact specific to the service provider?
	Data Accessibility <i>Accessibility to administrative / institutional data for rigorous prospective evaluation, serving as the basis for end payments</i>	<ul style="list-style-type: none"> • Are data currently available to measure the outcome(s) of interest? • If so, can such data be feasibly accessed as part of a Pay for Success project?
	End Payers <i>Committed end payer(s) prioritizing financial and social benefits, shaping final project's value proposition</i>	<ul style="list-style-type: none"> • Are there entities willing to pay for attainment of the identified outcome(s)? • If so, under what conditions?

To assess these criteria, we conducted over 25 interviews with nearly two dozen stakeholders representing a broad range of organizations, including:

- uAspire leadership and program staff
- Leaders and administrators at Massachusetts public two- and four-year colleges and universities
- State-level policymakers and advocacy organizations
- Providers, funders, and evaluators working in other jurisdictions on issues germane to PFS in higher education

uAspire: Provider Snapshot

uAspire's mission is to ensure that all young people have the financial information and resources necessary to find an affordable path to – and through – a post-secondary education. Though a national organization providing programming in over 15 states, its largest direct service area is located in Massachusetts, with over 8,000 students and families receiving college affordability advising services each year. uAspire provides face-to-face advising services to students starting as early as junior year of high school and leverages multiple technology channels, such as providing reminders and information via text message, to counsel students on college affordability milestones and processes, including fall college enrollment, accessing and understanding financial aid awards, student loan disbursement, and tuition payments. These services reach the students most in need of assistance navigating the complex labyrinth of college affordability: 83% of the students served by uAspire are low-income, and 77% will be the first generation of their family to graduate from college.

In 2012, uAspire introduced text message “nudging”¹² to combat “summer melt,” a phenomenon where between 10% and 20% of high school graduates nationally (30-40% in some urban districts) who have been accepted into a college and plan to attend do not start classes in the fall.¹³ Concurrently, uAspire introduced text message “nudging” for students already enrolled in college, supporting them in remaining enrolled and persisting towards degree completion. These text messages focus on specific milestones in the financial aid process, and although the initial texts are automated,¹⁴ students who respond subsequently interact with a trained uAspire affordability advisor and can explore issues in greater detail. The interventions have had statistically significant outcomes for students: in a study conducted with researchers at the Harvard Graduate School of Education, students in Lawrence and Springfield, Massachusetts who received uAspire's pre-matriculation summer text message support (Summer College Connect) were 7.1 percentage points more likely to enroll in college than were those who did not.¹⁵ There is also evidence that community college students who received text message support through their first year of higher education were twelve percentage points more likely to persist into their second year.¹⁶ Students in both studies began with uAspire's high school-based in-person advising services (Afford) prior to the study period.

We conducted a PFS feasibility assessment centered on uAspire's text-based service offerings to increase college matriculation and persistence – as well as graduation – of low-income and first-generation students. uAspire and Third Sector's shared hypothesis was that PFS contracting could be a mechanism to scale and sustain uAspire's text-based service offerings in Massachusetts and could serve as a model for other PFS projects in higher education. Three key factors informed this hypothesis:

Low Programmatic Costs – The cost to deliver text-based services is remarkably low; in uAspire's case, this holds despite using automated texts for only the initial outreach. After that, trained college advisors send personalized messages. For example, we estimated the cost per student per year of a post-secondary persistence-focused intervention of this type as less than \$150.

Measurable Impact – Enrollment, persistence, and graduation are outcomes that are clearly defined and easy to measure, which are critical pre-conditions for PFS viability. uAspire's text-based interventions have some existing evidence of effectiveness with regards to enrollment and persistence, as noted above; additionally, evidence from other similar interventions support these findings. What is more, while the measurement of impact on graduation is underway, it is plainly the case that without student enrollment and persistence, graduation will not occur. As such, it is a reasonable hypothesis that uAspire's and other similar interventions may also improve graduation rates¹⁷.

Benefits to Potential End Payers – Identifying an entity willing to pay for the achievement of specific outcomes is typically the biggest hurdle for any PFS project. There are a range of public entities that could serve as an end payer for a PFS project focused on uAspire services. Similarly, there are a range of financial benefits that might prompt such an entity to serve as an end payer. For instance, in an environment of declining enrollments for most institutions, coupled with declining state support for post-secondary education, HEIs have a clear financial interest in increasing enrollment and reducing churn among matriculated students. Community colleges in particular have experienced significant number of unfilled enrollment slots in recent years.¹⁸ State outcomes-based funding systems may also incentivize improving performance on these metrics, among others, particularly among specific priority student subpopulations. In addition, there is an increasing demand for higher education tied to specific employer needs; satisfying these needs has a clear economic benefit to the region.

uAspire's preliminary PFS project goal involved testing the viability of formally partnering with an HEI or network of such institutions in an outcomes-based contract. Third Sector's task in this engagement was to provide uAspire with an initial landscape assessment that would gauge its readiness to secure PFS funding, along with a strategic roadmap for taking the PFS model to the broader landscape of potential funders, end payers, and other potential project partners.

Why PFS Works in Higher Education

Our exploration determined that Pay for Success is clearly feasible in higher education. Post-secondary interventions focused on supporting disadvantaged students enroll, persist, and graduate from higher education institutions succeed in several of the areas critical to PFS feasibility outlined above. Below we lay out the essential building blocks that make PFS an attractive mechanism for service providers delivering these supports to pursue in order to scale their impacts.

Research Evidence

The presence of rigorous research supporting the effectiveness of an intervention is a critical foundational piece for any PFS project. In order to structure a financial agreement linked to achievement of outcomes, project partners typically require specific impact estimates for the program in question, ideally implemented by the service provider engaged on the project.

A growing body of evidence points to the effectiveness of student support services for disadvantaged students that facilitates their journey to and through post-secondary education. Service providers, particularly those offering these types of services, have recognized the need to demonstrate impact and have included their service offerings in a host of research studies designed to measure program effectiveness.

The term “student support services” broadly encompasses efforts to facilitate student success in post-secondary education; in the context of services provided by non-profits, this primarily involves services to low-income or first-generation students designed to ensure their progression to and through higher education. These supports may begin in high school or college, with services delivered during one or both of these phases of the student journey. Such services may involve in-person coaching or mentoring, remote text-based support, or some combination of the two. Program content may be comprehensive or focus on specific barriers facing at-risk students, such as academics, college culture and integration, or in the case of uAspire, financial aid and affordability.

As these organizations and their services have proliferated, so too has the research evidence of their effectiveness. For example, uAspire’s text-based interventions focused on enrollment (Summer College Connect or SCC) and persistence (Succeed) have been the subject of several randomized controlled trials. The results are indeed promising: students participating in SCC in Lawrence and Springfield, Massachusetts, where other sources of college planning support were limited, were more than seven percentage points more likely to enroll in college compared with similar students who did not participate.^{19,20} Research evidence for Succeed found a twelve percentage point increase in persistence into sophomore year for community college students with an almost fourteen percentage point increase in the likelihood of students remaining continuously enrolled through the spring of sophomore year, regardless of location.²¹ It is important to note, however, that students in both studies began with uAspire’s high school-based in-person advising services (Afford) prior to the study period; they had a relationship with uAspire prior to receiving text message support.

Similar text-based “nudging” interventions and other college completion supports have demonstrated statistically significant results in rigorous research in other geographies, especially around early outcomes like enrollment and persistence. For example, using an automated text-based service similar to SCC that targets students contemplating enrollment (AdmitHub), Georgia State University observed a 3.9% increase in enrollment and a 21.4% reduction in summer melt, compared with students who were not assigned to receive the AdmitHub outreach.²² First-generation students, Pell Grant recipients, and non-white students were all more likely to engage with the AdmitHub service.²³ Importantly, students received the AdmitHub outreach without having first received in-person advising services during high school.

Another study examined the impact of providing financial aid application assistance to low-income adults and their dependent children during the tax filing process. The authors found that doing so increased the likelihood that individuals with limited means would attend college and stay in college once they enrolled. High school seniors whose parents participated were eight percentage points more likely to have completed two years of college, increasing from 28 to 36 percent, during the first three years following the experiment. The authors note the remarkably low investment required by the intervention: providing FAFSA assistance took eight minutes, on average, and cost about \$3 per participant.²⁴ We provide details on additional research findings examining similar interventions in the Appendix.

More broadly, researchers have taken advantage of the increasing availability of administrative data to expand the scope of research focusing on critical policy questions in post-secondary education. The emergence of rigorous studies of post-secondary outcomes and potential interventions to improve those outcomes is a trend that potential PFS projects can leverage as they move forward in the project feasibility and construction process.

The range of organizations developing innovative solutions to address the persistent challenges in higher education, particularly for underserved and at-risk student groups, continues to expand. The continued proliferation of these types of organizations provides ongoing evidence of the clear need that these services address.

Project Economics

Fundamental to the process of PFS assessment is an evaluation of project economics, as a key gauge of PFS viability is often the degree to which the cost savings and financial benefits derived from the intervention's outcomes exceed the cost of delivering services.²⁵

Our preliminary economic analysis of text-based student support services demonstrates that they succeed on this criterion. This positive net financial benefit is robust to different model assumptions and grows significantly in magnitude if we include benefits that accrue to system-level project partners, as opposed to only including benefits to matriculation and persistence for individual HEIs.

Furthermore, financial models for PFS program services in higher education are robust to student support services with significantly higher costs compared with text-based services. The financial benefits that accrue to HEIs, coupled with beneficiary populations that are large and relatively easy to identify, mean that changes in provider cost structures do not significantly alter our conclusions. This contrasts favorably with most other PFS projects, where active outreach to identify potential beneficiaries and intensive client supports are required, resulting in project cost constraints.

Below we outline the process of PFS financial modelling and the results that emerged as part of the PFS feasibility assessment.

Modelling the Economics of a Potential PFS Project

The process of economic analysis involves answering critical questions about project design and expected levels of impact. Specifically, the process requires answering the following:

- **Outcomes Valuation** – What are the outcomes of interest to potential end payers, and what financial value would we assign to them?
- **Expected Impact Levels** – What level of impact would the project demonstrate on the outcomes of interest, and over what time period?
- **Service Delivery and PFS Project Costs** – What is the cost to the provider of delivering services, and how does that vary with project size, the duration of services, and the expected levels of impact? What are the costs specific to the PFS project itself?

Other factors, such as the capital structure of the potential PFS project, are also included in such a model. Through discussions with uAspire program staff, staff at potential HEI end payers, other institutions and stakeholders, and a review of the research literature, we assembled information addressing these questions and developed an economic model that is adaptable to different potential PFS projects in higher education.

Outcomes Valuation and Expected Impact Levels

Given our initial hypotheses about how benefits accrue from student support services, we focused our outcomes valuation work on assessing outcomes valued by individual HEIs; uAspire's long track record of success and strong relationships strengthened our ability to engage directly with these institutions.

Matriculation, persistence, and graduation are the three critical outcomes relevant for interventions targeting student success in post-secondary education. Some organizations may have additional outcomes of interest, wish to examine impacts for specific subpopulations of students, or seek to measure longer-term outcomes such as employment and earnings. The inclusion of these outcomes, however, will largely be project specific; as such, we focused our analysis on the financial valuation that potential project end payers would assign to these three measures of student progress through and to completion of their post-secondary education.

Using data from Massachusetts, we developed estimates of the financial value that potential project end payers would assign to these outcomes. For matriculation and persistence, our financial valuation is derived from the average Pell Grant award size in the state, weighted by the proportion of students who attend full-time or part-time statewide. This measure of financial valuation for matriculation and persistence stems from the fact that the vast majority of students served by these student support programs receive Pell Grants, and our initial hypothesis was HEIs easily understand Pell Grants and that such grants represent a stable source of funds that students utilize to cover the cost of tuition.

ESTIMATING FINANCIAL VALUATIONS FOR MATRICULATION AND PERSISTENCE

	FULL-TIME	PART-TIME	WEIGHTED VALUATION
Average Pell Grant award in Massachusetts²⁶	\$3,700	\$1,850	\$3,300
Percentage of students statewide attending full-time or part-time²⁷	80%	20%	

The average tuition and fees associated with attending a Massachusetts community college full-time was \$6,034 in fiscal year 2018.²⁸ As such, the amount of additional tuition revenue for each additional student significantly exceeds the figures above, meaning these financial valuation metrics are likely conservative. Low-income and first-generation students in particular may also be eligible for other sources of grant aid such as state-level grant programs to cover any remaining tuition costs. Additionally, these valuations do not factor in other financial benefits accrued by HEIs as rates of enrollment and persistence increase, including reduced marketing and outreach costs to attract new students or outcomes-based funding for increased retention or credit completion. It should be noted that we explicitly excluded any consideration of student loans as a component of tuition revenue as a source for success payments, given the at-risk student population that would likely be included in a PFS project of this sort.

The model uses an expected level of impact on matriculation and persistence derived from the recent randomized controlled trials focusing on the impact of Summer College Connect and Succeed, which demonstrated a seven percentage point and twelve percentage point impact on matriculation and retention, respectively. That is, we express matriculation and persistence on a comparative basis, examining the impact of the intervention in comparison to a control group who are not receiving services as part of the project.

Determining the financial valuation for graduation is slightly more complex, given that the quantifiable benefit to an individual HEI is difficult to determine and that past studies do not measure the impact of these student support services on graduation rates. The value assigned to this outcome will ultimately depend on the institution's preference and the potential involvement of end payers willing to pay for the systems-level financial and social benefits that accrue from college graduation.

Since we believe that all potential end payers and private funders would require some service impact linkage to graduation, our economic model assigns a financial value per community college student who graduates or transfers to a four-year institution. There is strong evidence that an individual's attainment of a college degree – whether an associate's degree or a bachelor's degree – has an economic benefit to the local community. In fact, recent research implies that the system-level returns to education may exceed the economic returns that accrue to students directly.²⁹ The most quantifiable benefit is increased local and state tax revenue, driven by the student's increased income and spending and the resulting increase in income, property, and sales taxes. A recent Brookings study has estimated that an associate's degree leads to an increase of \$9,000 in present value of local and state tax revenue and a bachelor's degree, to an increase of \$44,000.³⁰

The Brookings report explains why these estimates should be considered conservative: "These estimates do not consider the reduction in government spending as a result of education (e.g. lower health bills, welfare, or crime costs); more broadly, the estimates do not account for multiplier effects, that for every additional dollar spent, some fraction will be spent again by the next person."³¹ Nor do these estimates include the impact on subsequent generations; for instance, there is evidence that a parent earning a college degree has an effect on their child's kindergarten readiness.³²

From this, we built a "rate card"³³ valuation of \$1,000 per graduation from a community college or transfer to a four-year college by taking the \$9,000 and utilizing the twelve percentage point impact level on persistence discussed previously and rounding down as a measure of conservatism.³⁴ In the current model, utilizing a rate card approach means that a project end payer issuing success payments for graduation would do so based on the total number of graduates or community college transfers from among the initial sample, rather than doing so on a comparative basis utilizing impact estimates from a randomized controlled trial, as the model does with matriculation and persistence.

Size Estimates for a Potential PFS Project

In our model, we hypothesize an initial sample of 1,500 students who receive text-based financial aid outreach during the summer after high school, with 1,200 of those (80%) matriculating at the HEI(s) included in the potential project. Of those 1,200 students, 960 students (80%) persist into their second year of college, and half of those (480 students) graduate (or transfer³⁵ to a participating four-year institution). We based these estimates on discussions with various stakeholders as part of the feasibility assessment.

These figures compare favorably with the size of a typical PFS project, which might enroll only several hundred participants over the course of multiple years. As a result, the financial model is robust to changes in matriculation and persistence percentage estimates which may occur during conversations with end payers and providers.

Our discussions with HEIs in Massachusetts validated our initial assumptions about available slots for additional students at these institutions, particularly community colleges. For institutions with available capacity to absorb additional students, a new student with a Pell grant represents a significant revenue enhancement as the marginal cost of adding a student is insignificant. Even where a school is ostensibly at or over capacity, institutions indicated that they would find room and would still attach value to services targeting matriculation. Persistence-focused support was a recognized need across institution types.

Service Delivery and PFS Project Costs

The costs of delivering student support services for disadvantaged students pursuing post-secondary education are considerably lower than many other services provided by non-profits. Students who face barriers to access and success typically do not require intensive interventions to address multiple barriers, rather they need guidance and insight in navigating a foreign and admittedly complex process. As a result, even in-person coaching supports and similar higher-touch interventions are considerably cheaper than many interventions targeting other social issues.

For example, costs to deliver uAspire's text-based services are remarkably low. The initial text messages provided to students are automated; if the student responds, then follow-up messages from uAspire are delivered by a college affordability advisor. In most cases, the automated texts are content-specific to a particular institution and its financial aid deadlines. These characteristics allow the student-to-advisor ratio to be relatively high, while still providing for highly-personalized, student-specific financial aid information and advice.

Looking at specific cost estimates, we determined that the cost per student per year of uAspire's post-secondary persistence-focused intervention (Succeed) are less than \$150. The summer matriculation-focused intervention (Summer College Connect) has proportionally higher costs due to a much lower student-to-advisor ratio, however even despite this, the cost per student for the two-month summer intervention is just over \$75.^{36,37} Costs for similar text-based services are in some cases even lower, such as AdmitHub's service that leverages artificial intelligence to considerably reduce the amount of overhead and staff time per student. Higher touch support services, while quite a bit more expensive, are still cost-effective in relation to their impact on students; costs for College Forward's near-peer counseling model, for example, are approximately \$475 per student per year.³⁸ Given the projected size of a PFS project in higher education and in contrast to PFS in other issue areas, our model indicates that a potential project would be able to absorb providers with higher costs such as this, given the projected sample size and financial benefits to project end payers.³⁹

Financial Overview of a Potential PFS Project in Higher Education

As discussed above, the inputs or “drivers” of a PFS project include:

- Cost structure of the service provider
- Capital structure of the PFS project
- Expected impact of the program on the outcomes of interest (in this case, matriculation, persistence, and graduation)
- Financial benefits – The value of achieving these outcomes, whether on a comparative or rate card basis
- Success payments – The amount that the project end payer is willing to pay for each outcome (again, whether on a comparative or rate card basis) which may, or may not, be explicitly tied to the financial benefits

Taken together, these economic building blocks allow us to develop an illustrative economic model that outlines the financial mechanics of a potential PFS project focusing on student support services and post-secondary outcomes. The model is designed to show the flow of funds, also known as the “sources and uses,” of a PFS project and a cost benefit analysis of the intervention based on certain project conditions or inputs. Below we detail the results of our cost benefit analysis and outline the sources and uses of the potential project based on our initial project structure assumptions.

COST BENEFIT ANALYSIS

Our analysis demonstrates a strong net positive cost benefit from text-based student support services focused on post-secondary matriculation, persistence, and graduation.

OUTCOMES	[1] MATRICULATION	[2] PERSISTENCE	[3] GRADUATION/ TRANSFER	TOTAL
Total Population Served	1500	1200	960	
Cost	(\$114,010)	(\$313,424)	\$ -	(\$427,435)
Population Completed	1200	960	480	
Financial Benefit	\$279,720	\$383,616	\$0	\$663,336
Social Benefit (based on per person est.)	\$0	\$0	\$480,000	\$480,000
Net Value	\$165,710	\$70,192	\$480,000	\$715,901

Specifically, our cost benefit analysis shows that a hypothetical project delivered over the course of a little over two years and starting with an initial sample of 1,500 students yields a net value of over \$700,000. In this analysis, we use the term “financial benefits” to denote those benefits that would accrue to an individual HEI in such a project (i.e. through increased tuition); as discussed above, this is based on the weighted average Pell Grant amount in Massachusetts and is calculated on a comparative basis examining the marginal impact of the text-based intervention compared with a control group. The term “social benefits” is used to denote benefits that accrue at the system level, in this case from graduation or transfer to a four-year institution. It is valued at \$1,000 per graduate or transfer, as discussed above. In our current example, we assumed a total of 480 students graduated or transferred to a four-year institution after the conclusion of the approximately two year program period. Cost estimates are derived from our discussions with uAspire program staff and other stakeholders.

Even if we remove the rate card payments attached to graduation or transfer from our cost benefit analysis, the net value of these student support services is still positive; we need not consider these social benefits to find a project that has a net positive financial affect. That is, given the other assumptions in the model, the text-based matriculation and persistence-focused interventions have a positive net financial benefit for HEIs. Conducting a further sensitivity analysis, we see that the intervention’s impact on these outcomes can fall to below three percentage points and ten percentage points, respectively, before the net cost benefit reaches zero.

PROJECT SOURCES AND USES

Mapping the sources and uses of a PFS project mirrors the practice of double entry accounting and provides a project-level synopsis of the project capital stack and how those funds are used to fund PFS and programmatic costs, as well as potential success payments.

SOURCES OF FUNDING FOR PFS PROJECT		USES OF FUNDING FOR PFS PROJECT	
PRI Loan	\$200,000	Programmatic Service Costs	\$427,435
Recyclable PFS Grant	\$300,000	Other PFS Program Costs (evaluation, etc)	\$200,000
Success Payments	\$571,668	PRI Loan Interest	\$30,000
		PRI Loan Repayment	\$200,000
		Recycled Grant Funds/Surplus	\$214,233
Total	\$1,071,668	Total	\$1,071,668

Our initial project financing assumptions involve both program-related investments (PRI) and fully recyclable grant funds; given the still-developing evidence base for these types of student success interventions, for these purposes we assumed that an early pilot project would not attract other return-seeking capital. As such, the current project includes 40% upfront PRI financing, with the remaining 60% of upfront funding coming in the form of recyclable grant funds. “Base case” percentage point impacts are seven percent on matriculation and 12% on persistence, as discussed above, with graduation/transfer valued using a rate card approach.

For purposes of calculating the PFS economics, we derive the outcome payments by discounting the economic value assigned to each outcome by 50% as a measure of conservatism. In any PFS project, whether a project end payer provides success payments equal to the exact financial value they derive from the achievement of a particular outcome is a matter of negotiation: the end payer, service provider, and funders share in the success generated by a particular project. For purposes of this project, this means that the outcomes of matriculation and persistence are valued at \$1,650, with a rate card payment of \$500 assigned to graduation or transfer to a four-year institution. So, while we use the cost benefit analysis to inform PFS outcomes pricing, ultimately PFS outcomes pricing is decided by PFS project parties, who will negotiate outcome pricing based on the specifics of a particular project.

Despite these conservative assumptions, our economic analysis shows that such a project would be viable. Under our initial impact assumptions, the PRI loan (at six percent interest) is fully repaid and over \$214,000 of additional grant funds (approximately 71% of the initial grant funds) can be recycled back into the project to provide capital to fund additional program services. Conducting a sensitivity analysis, we determined that service provider and PFS project costs are fully covered, including loan repayment, even if impacts fall to five percentage points for matriculation and nine percentage points for persistence and only 25% of students persisting into their second-year graduate or transfer during the project. Conversely, all grant funds become fully recyclable if impacts rise to nine percentage points for matriculation and fifteen percentage points for persistence.

Both of the above analyses of text-based student support services demonstrate clear success in relation to the financial criteria upon which any PFS project is measured. These financial metrics are robust to different model assumptions, particularly if we include benefits that accrue to system-level project partners as opposed to only including benefits to matriculation and persistence for individual HEIs. PFS in higher education therefore passes a critical hurdle with regards to the financial viability of a potential project.

Philanthropic Interest and the Potential for Outside Capital

Our discussions with philanthropic stakeholders during the PFS feasibility assessment process, as well as our survey of the post-secondary landscape, points to strong interest among potential philanthropic partners in funding PFS projects in post-secondary education focused on student support services. We identified two key drivers of this interest:

Favorable Economics and the Ability to Achieve Measurable Impacts

As shown in our economic analysis of a potential PFS project focusing on text-based student services and financial aid supports, the economics of such a project are highly favorable and would clearly be of interest to philanthropic organizations interested in directing dollars to promising PFS projects. These economics make for a highly “investable” project, both philanthropically and for commercial funders; while it may initially be difficult to attract market-rate return-seeking capital without significant philanthropic dollars providing “first loss money,” the economics of such a project indicate that a PFS project, developed after a sustained pilot, could attract significant interest from commercial lenders interested in PFS. In particular, the economics of PFS in higher education compare favorably with those in other issue areas, given the ability to easily target a large group of beneficiaries with relatively low cost. As a result, the hypothesized financial commitment outlined above is an order of magnitude smaller than that in most other PFS projects while simultaneously serving more beneficiaries.

Such a project allows an organization to impact a high number of people with relatively low cost. And while this makes the investment economics highly favorable, it also means that funders interested in post-secondary outcomes who are looking to maximize impact per dollar spent will view the PFS project as a way to efficiently allocate funds to achieve these outcomes. That is, the cost benefit determination, rather than the negotiated financial structure of the PFS project, is the key driver for these types of organizations.

Continued Philanthropic Interest in Improving Post-Secondary Outcomes

Concurrent with the development of outcomes-based funding formulas for public colleges and universities is a growing interest among the philanthropic community to target their grant-making and investments towards initiatives that succeed in attaining critical student outcomes and that enable this broader transition towards outcomes-driven decision-making in higher education. These efforts have focused on initiatives such as alternative pathways to post-secondary education, college affordability, student counseling, and supporting and smoothing the transition from high school to college, among others. The work of uAspire and other similar organizations encompass all three of the latter issue areas, with uAspire’s work specifically addressing the affordability and financial component of the transition to higher education (and subsequent success and ongoing financial feasibility once enrollment occurs).

A key challenge identified during our work highlighted the need for such services and crystallized the desperate need to scale innovative approaches for supporting qualified students in making the transition from high school graduates to successful college graduates: several Massachusetts community colleges we spoke with identified a large pool of students (thousands every year, in fact) who were otherwise qualified (and in most cases, were admitted) to attend their institution but ultimately did not. This in and of itself is perhaps not surprising, as student yield is an ongoing question for HEIs. However, further analysis by these institutions demonstrated that these “missing” students did not matriculate at any HEI. That is, students from disadvantaged backgrounds who were interested in college and qualified to attend did not do so because of primarily financial and/or family reasons. This “summer melt” was in part the impetus for the current work, however the stories from these institutions sharpened the reality that summer melt is not simply a question of students shuffling between institutions; instead, it represents a collective failure to support at-risk students for whom college can serve as a pathway to increased economic security and a brighter future.

Several philanthropic funders are attempting to address this challenge by taking an approach to grant-making that looks to support efforts that integrate secondary and post-secondary efforts under the umbrella of a regional ecosystem that supports students throughout the continuum of their educational experience. These efforts by the Kresge Foundation, the Gates Foundation, and others may present opportunities for PFS insofar as they can help identify “system level” stakeholders who have incentives to value increased post-secondary attainment in a broader, regional way rather than narrowly defining outcomes for a particular HEI.

uAspire’s recent partnership with the University of California (UC) system, through the Office of the President (UCOP), is a demonstration of how this approach might work. In this engagement, UCOP funds uAspire college affordability advising to serve students via text message within the traditional catchment areas of UC schools. During its pilot year, the program also provided in-person student workshops through the UC’s Early Academic Outreach Programs. The ultimate goal of this partnership is to increase access to financial aid for low-income students and to enable them to attend these institutions, combating the perception that these schools are unaffordable for students of limited means. While students can ultimately decide to attend any institution, UCOP leadership recognizes the need to increase the pipeline of low-income, first-generation students attending UCs. Since this example centers on text-based advising services, it would be easily adaptable to a new region or higher education system, or could be combined with targeted in-person services within a hybrid program.

When considering these efforts in the context of PFS, and when examining the project finances of a potential PFS project, it is clear that the PFS economics and the attractiveness of a particular intervention are contingent on well-defined referral pathways and the continued development of evaluation evidence. That is, additional specific questions must be addressed as critical next steps if PFS is to be used as a mechanism to scale or leverage the above efforts. In the following section, we document these challenges and then proceed to describe a way forward for PFS in higher education.

Challenges to Leveraging PFS in Higher Education

As we laid out in our introduction to the PFS feasibility assessment process, any potential PFS project requires addressing several key questions about the services provided: who they are designed to serve, their historical record of performance, whether data is available to measure outcomes, and what entities might be engaged to serve as an end payer as part of a PFS project. Our PFS assessment process identified several gaps with regards to these criteria that providers and other stakeholders would need to address as they continue to explore PFS in higher education.

Defining the Intervention and Measuring Impact

Understanding the intervention, the intended beneficiary population, its track record of generating impact, and whether those impacts can be measured in a PFS context are all critical PFS prerequisites. Within each of these, we identified clear potential but also clear challenges for PFS projects in higher education.

Developing Further Research Evidence

As discussed above, a wide variety of student support services, particularly text-based services, have shown positive results when studied using rigorous social scientific methods. While these results have been strongly promising, they have yet to demonstrate the ongoing effectiveness of specific intervention components such that we might consider one or more of these models “evidence based” using common definitions. For example, while there is a developing research base examining the effects of text-based nudging on student post-secondary enrollment, the level of evidence has not yet reached the point where there is a general consensus that these programs can achieve impacts across different and diverse communities if well-implemented by an effective service provider. Additionally, the evidence of impact specific to persistence-related milestones is even more nascent. As a result, providers wishing to pursue PFS may need to further develop the evidence base for their particular service delivery model prior to engaging in a fully-fledged PFS project.

In addition, there is a logical connection between persistence and graduation: without persistence, graduation cannot happen. Evidence of an impact on persistence, however, may not equate to evidence of an impact on graduation, which likely will be a key outcome metric for potential state-level end payers; that is, it is possible that the observed effect on persistence does not last through graduation. None of the research literature of which we are aware examines the impacts of text-based interventions on two- or four-year graduation rates.⁴⁰

Despite these current research gaps, the continually evolving and dynamic nature of this space implies that further evidence of effectiveness will continue to emerge. For example, a nationally representative study of FAFSA renewal is currently underway, examining the impact on college persistence and completion of a similar text-based intervention targeting students currently enrolled in post-secondary education.⁴¹

Refining How and to Whom Services are Delivered

There are two issues involving how services are delivered in higher education settings that may present obstacles – or at least complications – to PFS project development. Both concern how stakeholders scope and define the beneficiary population to be included in the potential PFS project.

First, it is important to consider how students are referred to a program. For example, it is unlikely that an individual HEI end payer would be willing to pay for all students served at a given high school as only a fraction of college-going students in the school will end up enrolling at that specific HEI. If instead, the project is focused on students who are already admitted to an HEI, it may well be important to have evidence of how effective the intervention is with that specific population or an admitted student pool that is substantially similar.

Second, the majority of service providers delivering student support services begin those services during high school, which is reflected in much of the research evidence discussed above and in additional research studies presented in the Appendix. Preceding text-based or lighter touch services with in-person advising allows providers to learn more about student needs and develop rapport, in addition to offering an earlier conduit for service provision. In contrast, a potential PFS project involving one or more institutions of higher education serving as a project end payer would likely not involve such prior in-person relationship development, as the population would likely be identified by the institution based on lists of potential or current students. As such, current research evidence for post-secondary student support services does not match one of the likely PFS project designs for these types of service.

Depending on the perspective of end payers and philanthropic partners, it may be necessary to develop evidence of effectiveness for the specific PFS referral pathway and beneficiary population prior to any PFS project, including pilot or demonstration projects.

A caveat to the above is that the importance of the referral pathway is correlated with the level of end payer engaged for the PFS project. The closer that the project works directly with an institution, the more attention must be paid to the specific referral pathway for beginning and continuing services. In contrast, utilizing a regional approach that includes services at the high school level and/or a multi-level consortium of HEIs would diminish the importance of the referral mechanism because the focus is on delivering services within the broader project catchment area. uAspire's work with the University of California system is one example of this, albeit one that does not utilize PFS to fund program services.

A corollary to the challenge of defining how and to whom services are delivered centers around how the organization itself conceives of its mission and approach in serving students. PFS requires that service providers have a particular overall mindset that allows them to embrace alternative approaches to how their services are funded and from what sources. So just as PFS requires stakeholders to think clearly about how students are served, service providers must also assess how their organization aligns with the overall approach required to pursue PFS.

Improving Data Systems and Data Access

Our discussions with HEIs demonstrated that HEI data systems are not well prepared for the data demands of a PFS project (or most other performance management approaches, for that matter). Many of the HEIs we spoke with had trouble even sharing student data between departments due to antiquated rules or outdated systems. For example, staff in the admissions department at one HEI were unable to see any historical or current student records once a student had enrolled at the institution. Understanding what pre-admission factors influenced how well a student performed at the institution was not something the organization could answer in any systematic way.

Individual HEIs also articulated differing interpretations of how the Family Educational Rights and Privacy Act (FERPA), the relevant legislation that governs data sharing by higher education institutions, would impact their ability to share student data for purposes of a PFS project. The guidelines issued by the Department of Education imply several ways through which HEIs could share data as part of a PFS project; however, further investigation to confirm the applicability of these provisions is necessary.⁴²

Identifying Potential PFS Project End Payers

Examining the end payer landscape within Massachusetts helped us to identify key issue areas for examination as future higher education PFS opportunities are evaluated and potential end payers are engaged. Below we document a range of possible project end payers and the unanswered questions and key landscape issues that impact their viability:

High Schools and School Districts

Supporting students in their transition from high school to post-secondary education is clearly “on mission” for schools and school districts. However, these organizations have no direct incentive to fund services that support students in achieving milestones that occur after a student has left a particular school. In a challenging school financing environment, it is unlikely that school districts would have funds available to support these efforts. One exception may be charter management organizations (CMOs), who are continually looking for data-driven ways to demonstrate their impact and effectiveness and enhance their social license to operate, and in some cases, have staff teams dedicated to tracking high school and college trajectories of their students. But here too, the direct financial benefits are difficult to measure.

Individual Higher Education Institutions

The most direct and quantifiable impact of increased student matriculation and persistence accrue to individual HEIs, given how closely linked these measures are with the finances of the institution (primarily through tuition revenue). Declining enrollments and reduced state appropriations combine to make the present moment a critical time for HEIs to explore pathways to improve the rates at which students enroll and persist at their institution, a concern echoed by several of the HEIs we spoke with in Massachusetts.

However, as previously noted, colleges and universities are highly idiosyncratic. HEIs we spoke with evidenced broadly disparate perspectives on the value of outside contractors to assist with student support services. This implies that direct PFS partnerships with HEIs must be tightly tailored to a specific organization.

Additionally, while HEIs implicitly understood that matriculation and persistence were financially valuable, there was a gap between this understanding and their ability to determine a precise financial valuation for these metrics. Although a PFS project could in theory be constructed using solely the financial value of additional tuition revenue as the basis for success payments, a full-scope assessment of how changes in matriculation and persistence affect an institution's finances, including costs associated with marketing, student support services, instruction, etc., may improve the project's economic outlook and promote the adoption of PFS.

Lastly, constructing a PFS project is in part about formalizing a relationship. As such, individual HEIs and service providers must ensure that their organizations are well-matched on a number of criteria. For example, attaching incentives to matriculation requires that the service provider is confident in the quality of the institution and its affordability and fit for individual students. This implies a need for a robust due diligence and partnership selection process to ensure the organization partners with only high-quality institutions that provide a relatively affordable pathway for post-secondary attainment. HEIs conversely might be concerned that students with incomplete financial aid information or other challenges are less likely to be fully prepared to go to college, or they may feel as if payments around matriculation appear to be a "bounty" for attracting students. Although the incentives centered around persistence help to check this concern (as they would reduce incentives to matriculate under-prepared students), some initial data analysis on historical rates of college success for students with similar challenges to college attainment would likely be warranted to assuage these concerns, establishing a baseline for project parties and helping to demonstrate provider ability to impact the outcomes of importance.

PFS is one of several options in terms of how HEIs approach providing additional student support services to disadvantaged students and potentially aligning contracting with desired outcomes. For example, HEIs could hire dedicated staff to conduct expanded student outreach (such as text message reminders, near-peer mentoring, etc.); they could procure an outside service provider to provide such services using a standard cost reimbursement or fixed price contracting model; they could procure an outside service provider but include some outcomes-based contingent payments in these contracts to incentivize performance on important outcome metrics; or they could pursue PFS projects with service providers and utilize upfront funding sources that are repaid (in whole or in part) only after specific student outcomes are achieved.

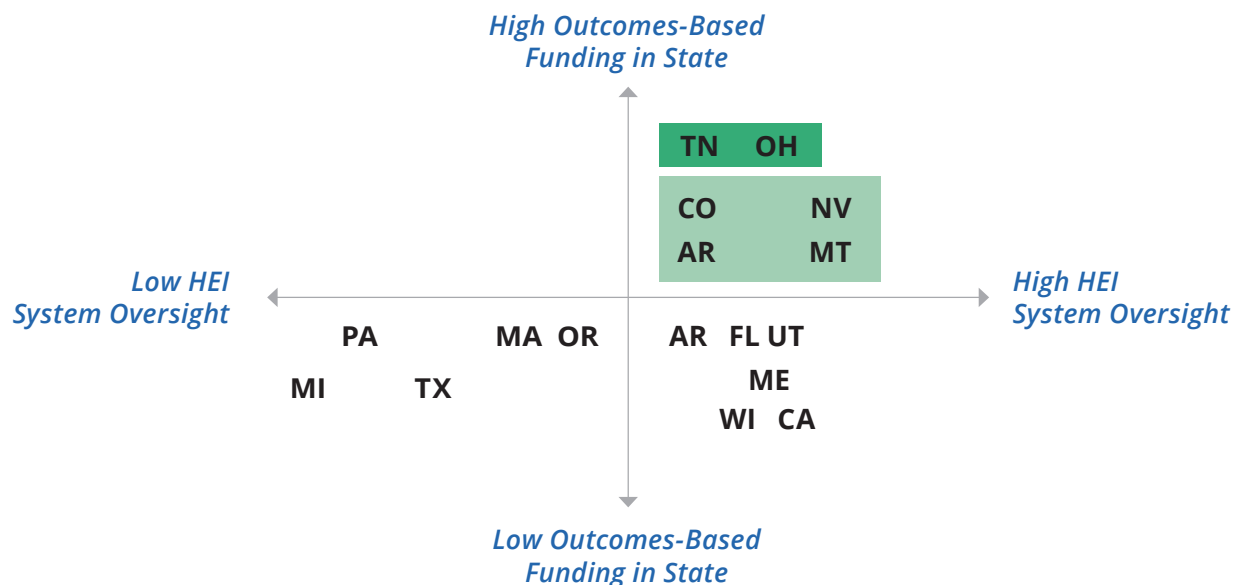
As might be suspected, HEIs will likely fall across the spectrum of these options. However, the benefits of PFS in its ability to rigorously target outcomes and facilitate access to upfront capital to rapidly scale program services (and mitigate the risk of paying for services that do not achieve measurable outcomes) will generate interest among some HEIs as was reflected in our discussions with stakeholders in Massachusetts.

State or Large Metropolitan Area

As discussed earlier, a large portion of the benefits from increased post-secondary attainment accrue to “system level” stakeholders. Reflecting this, our financial valuation metric for graduation is based on a recent Brookings study that estimated that an associate’s degree leads to an increase of \$9,000 in present value of local and state tax revenue and a bachelor’s degree, to an increase of \$44,000.⁴³ These financial benefits, however, are diffuse and challenging to measure in such a way that impacts can be attributed to a specific program directly.

That said, the proliferation of outcomes-based funding formulas in states across the country provide a direct way that states are working to value specific outcomes from colleges and universities. Funding formulas for many public colleges and universities now tie a portion of state funding to achievement of specific outcomes (such as degree completion), and the portion of funds allocated through these mechanisms continues to increase. For example, more than two-thirds of states use or will soon implement outcomes-based funding models for two-year, four-year, and/or technical colleges,⁴⁴ and Ohio, for example, uses an outcomes-based funding formula to allocate 100% of community college funding and 80% of funding at four-year institutions.⁴⁵ So although these formulas do not fully measure the economic benefits that accrue at the state level from a more educated populace, they do represent an effort by states to create an underlying valuation for the delivery of specific post-secondary outcomes.

State outcomes-based funding formulas vary widely in the outcomes incentivized and the amount of money included in the formula, as well as the overall formula structure. Given the clear importance of outcomes-based funding for the viability of PFS, we have attempted to categorize a handful of states with regards to the strength of their outcomes-based funding formulas. We chart these formula strengths against the degree to which state-level agencies have oversight over HEIs in the state and their ability to impact HEI decision-making; this leverage over decision-making facilitates the ability of system level stakeholders to help create PFS projects that require the involvement of individual institutions.



We define the level of outcomes-based funding by evaluating the “formula-driven” base funding structure, including whether it has been sustained over consecutive years, as well as measuring the amount of funding subject to the outcomes-based funding formula. For the “low” group, the average is five percent; for the “high” group, the average is twenty-five percent.⁴⁶ Note that some states rated as “low” actually have no outcomes-based funding at all (as is the case in California). Our measure of HEI system oversight is based on several metrics: (1) the type and relative authority of the HEI governance structure in the state, including consolidated governing boards, coordinating boards / agencies, or some other structure with further reduced authority, (2) whether there is a single governing board or multiple boards / agencies encompassing public institutions, and (3) the degree of budgetary authority or oversight for each governing board or entity.⁴⁷

The top right portion of the chart represents the seemingly ideal conditions for a PFS project in higher education: strong outcomes-based funding combined with a high degree of state-level oversight over HEI decision-making. We highlight a handful of jurisdictions that appear to fall into this category based on our initial analysis.

One important caveat is that describing outcomes-based funding systems based purely on an assessment of policy design and the funding formula characteristics may not accurately depict the impact of the outcomes-based funding formula on HEI decision-making. Probing slightly beneath the surface of written regulatory systems allows for an understanding of how regulations actually influence behavior. For example, press coverage in Massachusetts about the state outcomes-based funding formula imply that the formula has had significant impacts on institutional budgets and decision-making, particularly for community colleges.⁴⁸ However, each of the two-year and four-year institutions that we interviewed shared that outcomes-based funding *had no impact or influence* on their decision-making. Institutions provided the following rationales for their perspective: (1) The amount of outcomes-based funding was a very small percentage of the state funding allocation and their budgets overall, and (2) overall reductions in state funding for higher education meant that less and less of their yearly budgets were composed of state funding allocations, with this lost revenue recouped through increases in institutional “fees.” State level policymakers echoed the perspective of these HEIs, with one stating, “I never hear anyone complain or celebrate that outcomes-based funding is affecting them.” Officials also lacked clarity on the mechanics of the outcomes-based funding model and how it translated to impacts at the institutional level. All of this points to the need to conduct more extensive research on how outcomes-based funding formulas actually incentivize the behavior of HEIs.

Consortium / Regional Approach

Constructing a PFS project that takes the above three groups together in some combination would in some ways be an optimal approach. Assembling these stakeholders together in a consortium that is likely regional in nature, with some or all serving as project end payers, engages multiple actors in the process of recognizing, allocating, and capturing the value that emerges from supporting high-need students in pursuing post-secondary education.

Several institutions in our sample discussed the concept of creating a partnership between a four-year institution and an affiliated community college that currently serves as a feeder school. Student attendance patterns for both community colleges and less-selective public four-year institutions are driven largely by geography. As a result, institutions serving highly overlapping geographic areas already recognize frequent transfer patterns and are often already coordinating with one another with regards to student services. These discussions highlighted the potential value of student transfer as an outcome metric in a potential PFS project.

The recent partnership between uAspire and the University of California system is another example of how a regional or consortium approach might work. This example involves the HEI system investing in communities by providing student support services during high school. While students can ultimately decide to attend any institution, the University system recognizes that these efforts will benefit their campuses through increased enrollment, as well, as persistence if provider services are continued post-matriculation. Engaging an HEI system in some ways represents a hybrid of the individual institution and state-level approaches discussed above; the HEI system, together with the individual institutions, can capture the direct financial benefit of increased enrollment and persistence, but the project would be adaptable in that students can attend a range of possible institutions within the PFS project. Doing so also facilitates the due diligence and project construction phases as project parties can engage with a centralized organization that has some oversight over individual institutions where services would actually be delivered.

Another approach might center on high schools and HEIs within a smaller geographic area. For example, services could be provided throughout an entire school system (or group of systems) with a sufficient level of student enrollment and a history (or high probability) of sending students to particular post-secondary institutions. These services would increase overall student post-secondary matriculation for the community, and the provider would then target student persistence in conjunction with HEIs involved in the PFS project. Involving multiple types of HEIs allows for enhanced coordination across institutions and the inclusion of student transfer as a PFS outcome. There is also the possibility of including a state agency system payer that transcends the HEI system itself in this consortium approach.

Determining the appropriate PFS project end payer(s) is a consistent challenge in PFS projects. In that regard, PFS in higher education is not unique, and we have attempted to highlight some of the barriers in the preceding sections. That said, our analysis identified several promising pathways for securing an end payer. Below we detail our recommended next steps for pursuing those options.

Conclusions and Next Steps

Pay for Success is clearly feasible in higher education generally and for a range of student support services specifically. Realizing this potential, however, requires addressing the gaps identified in the preceding sections.

Although there are clear financial benefits for HEIs in pursuing student support services of this nature, and through PFS particularly, there are only a small handful of examples of which we are aware that PFS has been pursued (in some form) focusing on student support services in post-secondary education. Not all of the details of these projects are currently public, but they broadly fall into two categories: (1) Projects emerging from established relationships at the local level, driven by the positive brand identity of a highly-credible local service provider, or (2) projects developed in states that have aggressive outcomes-based funding formulas that strongly incentivize HEIs to focus on outcomes relevant for PFS.⁴⁹ Absent these conditions, our analysis shows that it is hard to bridge the gap from amorphous approval to willingness to pay through a dedicated PFS project. As such, leveraging PFS as a scaling mechanism requires a deep understanding of which jurisdictions may provide the most hospitable conditions, specifically the state-level policy context and what existing relationships may exist between stakeholders, for a potential PFS project.

The preceding analysis implies a strategy that targets jurisdictions that provide favorable state and system-level oversight and external incentives for HEIs to value matriculation, persistence, and graduation. Our hypothesis is that the ideal project actually includes multiple end payers, involving a consortium of entities at different levels of government, anchored by a state or system-level institution with strong oversight and centralized decision-making that also has a robust outcomes-based funding formula. In such a scenario, the system-level end payer has leverage over individual HEIs through their control over some elements of HEI decision-making, as well as the incentive structure of the state outcomes-based funding formula. Individual HEIs retain the additional financial incentives generated by the achievement of project outcomes; however, the majority of the benefits from the PFS project accrue at the system or state level.

Given this, an initial step before developing individual projects is for providers and funders to identify jurisdictions that are most poised for Pay for Success in higher education. Doing so would allow providers and funders to better target their efforts and increase the probability of developing a successful project. However, the wide variance in outcomes-based funding formulas and the difficulty in defining them based purely on “desk research” necessitate a robust engagement process that can determine with a greater degree of certainty those jurisdictions.

Identify Jurisdictions Ready for Pay for Success

In order to identify jurisdictions that are a potential fit for PFS in higher education, we recommend conducting a further policy landscape evaluation designed to accomplish two goals:

- 1. Understand the practical impact of outcomes-based funding formulas by directly engaging with stakeholders.** As we noted above, the degree to which an outcomes-based funding formula provides meaningful incentives for colleges and universities is not ascertainable without talking directly with staff at these institutions.
- 2. Provide contextual insights as to the structure of HEI management and decision-making and the roles of the various state-level stakeholders.** Our approach to measuring the degree of centralized oversight and the power dynamics in a particular state is imperfect, but necessarily so. It is challenging, if not impossible, to adequately characterize such metrics without deep engagement with relevant state-level decision-makers.

One key outcome of this policy landscape evaluation is determining the “reference states” in terms of innovative higher education policy. That is, what are the handful of states that other states consider laboratories of innovation, to whom they look for regulatory and programmatic guidance? Are there institutions or individuals who also play this role? Once identified, the next area of exploration becomes: how can we work with them to generate systems change at the national level?

Many states are pursuing PFS or have already launched projects in a variety of issue areas. So, in addition to understanding the factors affecting PFS viability that are specific to higher education, one must also look at the context of PFS overall within the state and the potential appetite for new projects if a PFS pipeline has already been developed.

Develop Actionable Insights for Potential PFS Stakeholders

It is clear that simply identifying promising jurisdictions for PFS is insufficient given the need to address specific PFS project challenges. The preceding analysis led us to identify two additional areas of evaluation that we recommend be pursued alongside the above measures.

Evaluate data access and availability. Currently there is no clear consensus on the permissible level of data sharing within an institution or between it and other entities. HEIs referenced FERPA but have adopted varying interpretations and even displayed markedly different approaches to internal data sharing. Determining the legal impediments to the type of data sharing required for a PFS project, at a national as well as state level, would prove tremendously valuable. A set of data sharing guidelines, and a template data sharing agreement that addresses FERPA challenges, should be published in conjunction to provide actionable guidance and relevant tools for potential stakeholders. State-level materials could also be developed for jurisdictions identified as part of the process outlined above. In the long-term, the team engaged to develop these materials could serve as a centralized point of assistance in advocating and facilitating data access for higher education PFS projects.

Develop HEI toolkit for comprehensively measuring potential benefits. With few exceptions, colleges and universities lack the expertise to conduct a full-cost accounting of how the various factors related to matriculation, persistence, and graduation affect their bottom line. Developing detailed estimates as to the cost of conducting student outreach, the amount and impact of sub-optimal enrollment, the costs of retaining students and the negative impact of student churn, etc., are not activities that HEIs are currently equipped to do. However, the private sector has developed a variety of techniques and tools for addressing similar challenges (i.e. measuring and modelling the financial impact of customer churn), and it would be relatively straightforward to develop tools that would help HEIs do the same. Developing estimates that clearly quantify the financial impact of various issues help to make the financial case for a potential PFS project, and some work examining such issues has already begun. Reference institutions (such as Ivy Tech and Georgia State University) have done significant work estimating the ROI of potential programs; these institutions recognize the trends in the higher education space that we have documented here and could serve as important resources for other institutions.

We envision the above efforts would occur as part of a second phase feasibility assessment that not only seeks to describe the current landscape, but also develops tools and actionable recommendations that stakeholders across a range of constituencies can turn to as they pursue PFS in higher education.

Conduct PFS Pilot Projects

Testing Pay for Success in higher education through the development of pilot PFS projects would help stakeholders assemble the necessary building blocks for full-scale utilization of PFS in the higher education space and determine how, and under what conditions, this model would be effective in improving student outcomes. As noted above, despite the favorable economics of PFS in higher education, it may be difficult to attract market-rate return-seeking capital without significant philanthropic dollars at this early juncture. A set of philanthropically-funded PFS pilots would accomplish a number of key goals:

1. Testing different operational models, referral pathways, data collection approaches, service providers, PFS financing and repayment structures, and other variations on project composition (including geography).
2. Providing HEIs and other potential end payers – with their diverse perspectives – examples that can be referenced in conversations with service providers and other stakeholders as these groups look to secure organizations committed to paying for measurable outcomes.
3. Further developing research evidence for service providers and program models included in PFS pilots.
4. Developing overall proof points and capacity among all stakeholders to continue this orientation towards and commitment to paying for outcomes.

Realizing these objectives would help move us from some small-scale examples to fully-fledged PFS projects that enable high-performing service providers to access financing and improve the post-secondary outcomes of a much broader group of students. Because ultimately, PFS is not about conducting academic exercises; it's about measurably moving the needle by creating incentives for all stakeholders to improve the lives of program beneficiaries. Doing so in the context of higher education means helping at-risk students reach their full potential, and our hope is that PFS can serve as an important mechanism for accomplishing this goal.

Appendix:

A number of additional studies have examined the relationship between various student support services and outcomes such as enrollment and persistence. Some of the impacts determined as part of these studies include:

Impacts of another similar unbranded summer-focused texting intervention in the Dallas Independent School District demonstrated an almost 5 percentage point increase in the likelihood of enrolling at a two-year institution. Castleman, B.L. & Page, L. (2014). 'Summer Nudging: Can Personalized Text Messages and Peer Mentor Outreach Increase College Going Among Low-Income High School Graduates.' Working paper, University of Virginia. Available online: http://curry.virginia.edu/uploads/resourceLibrary/9_Castleman_SummerTextMessages.pdf

Examining the effect of a post-secondary student coaching intervention delivered by the organization InsideTrack, researchers found that students who were assigned a coach were more likely to remain enrolled in school, with this result holding for both the study period and one year after the conclusion of coaching. Coaching was also significantly more cost-effective in achieving retention and completion gains when compared to previously studied interventions such as increased financial aid. Bettinger, E. & Baker, R. (2011). 'The Effects of Student Coaching in College: An Evaluation of a Randomized Experiment in Student Mentoring.' NBER Working Paper. Available online: <http://www.nber.org/papers/w16881.pdf>

A recent randomized controlled trial of the College Possible coaching intervention found that program participants were 15 percentage points more likely to enroll at a four-year college or university compared with non-participants. Avery, C. (2013). 'Evaluation of the College Possible Program: Results from a Randomized Controlled Trial.' NBER Working Paper. Available online: <http://www.nber.org/papers/w19562.pdf>

Using a representative national sample of over 450,000 college-intending high school seniors, a recent study found that a summer text messaging campaign focused on when and how to complete the Free Application for Federal Student Aid (FAFSA) increased college enrollment by 1.1 percentage points overall, and by 1.7 percentage points for first-generation college students. Bird, K. A., Castleman, B. L., Goodman, J. & Lambertson, C. (2017). 'Nudging at a National Scale: Experimental Evidence from a FAFSA Completion Campaign.' Working paper, University of Virginia. Available online: http://curry.virginia.edu/uploads/resourceLibrary/55_Nudging_at_a_National_Scale.pdf

An email "nudging" experiment at Arizona State University resulted in an increase in FAFSA completion rates of up to 21 percentage points among students and parents receiving reminder emails, and an app-based experiment in the San Jose Unified School District found a 15 percentage point increase in financial aid applications and a 29 percentage point increase in the average financial aid award. These results were from a report by the organization ideas42 documenting over a dozen different efforts to leverage "nudging" to improve the post-secondary journey for students. Ideas42, June 2016. 'Nudging for Success: Using behavioral science to improve the postsecondary student journey.' Available online: <http://www.ideas42.org/wp-content/uploads/2016/09/Nudging-For-Success-FINAL.pdf>

The same "nudging" principle was used to test the impact of student loan offers on borrowing and post-secondary attainment, finding that community college students who borrowed to fund their education earned significantly more credits and had higher grade point averages. Marx, B.M. & Turner, L.J. (2017). 'Student Loan Nudges: Experimental Evidence on Borrowing and Educational Attainment.' Working paper, University of Illinois Urbana-Champaign. Available online: http://econweb.umd.edu/~turner/Marx_Turner_Nudges_Borrowing.pdf

Endnotes

- ¹ uAspire offers a range of service offerings to best meet the needs of disadvantaged students, including in-person, text-based, and virtual advising.
- ² The term end payer refers to the entity (or entities) that issues success payments when target outcome levels are achieved in a Pay for Success contract.
- ³ Castleman, B.L. & Page, L. (2014). 'Summer Nudging: Can Personalized Text Messages and Peer Mentor Outreach Increase College Going Among Low-Income High School Graduates.' Working paper, University of Virginia. Available online: http://curry.virginia.edu/uploads/resourceLibrary/9_Castleman_SummerTextMessages.pdf
- ⁴ Castleman, B.L. & Page, L. (2014). 'Freshman Year Financial Aid Nudges: An Experiment to Increase FAFSA Renewal and College.' Working paper, University of Virginia. Available online: http://curry.virginia.edu/uploads/resourceLibrary/29_Freshman_Year_Financial_Aid_Nudges.pdf
- ⁵ AdmitHub – Case Study: 'How Georgia State University supports every student with personalized text messaging.' Available online: <http://blog.admithub.com/case-study-how-admithub-is-freezing-summer-melt-at-georgia-state-university>
- ⁶ Outcomes-based funding refers to state funding formulas for higher education that allocate a portion of HEI funding based on student outcomes, such as credit attainment and graduation. Such formulas often include multipliers for serving specific groups of disadvantaged or high-need students, such as those eligible for Pell Grants. The amount of funding allocated through these methods varies by state.
- ⁷ Carnevale, A.P., Smith, N. & Strohl, J. (2013). 'Recovery: Job growth and education requirements through 2020.' Center on Education and the Workforce, McCourt School of Public Policy, Georgetown University. Available online: <https://cew.georgetown.edu/recovery2020/>
- ⁸ Ibid
- ⁹ Belfield, C. & Bailey, T. (2017). 'The Labor Market Returns to Sub-Baccalaureate College: A Review.' Working paper, Center for Analysis of Postsecondary Education and Employment (CAPSEE). Available online: <http://ccrc.tc.columbia.edu/publications/labor-market-returns-sub-baccalaureate-college-review.html>
- ¹⁰ Cielinski, A. & Pham, D. (2017). 'Equity Measures in State Outcomes-based Funding: Incentives for public colleges to support low-income and underprepared students.' Center for Law and Social Policy: Center for Post-Secondary and Economic Success. Available online: <http://www.clasp.org/resources-and-publications/publication-1/Equity-Measures-in-State-Outcomes-Based-Funding.pdf>
- ¹¹ Ibid
- ¹² The term "nudging" refers to a principle in behavioral science whereby small inducements and reminders can be effective in spurring task completion and larger behavioral change.
- ¹³ For more information on summer melt, see recent coverage by both the Wall Street Journal ('[College Admissions Officers Won't Just Chill About 'Summer Melt'](#)') and NPR's Hidden Brain podcast ('[Why Aren't Students Showing Up For College?](#)').
- ¹⁴ Milestone reminders are customized to align with school-specific deadlines if students have expressed interest in a specific school that is prevalent among the overall uAspire student population.
- ¹⁵ Castleman, B.L. & Page, L. (2014). 'Summer Nudging'.
- ¹⁶ Castleman, B.L. & Page, L. (2014). 'Freshman Year Financial Aid Nudges'.
- ¹⁷ A longer-term follow-up examining the impacts of text-based services on graduation is currently under way.

- ¹⁸ For example, in Massachusetts since FY2012, fall community college enrollment is down 13% (See: <http://www.mass.edu/datacenter/2016enrollmentestimates.asp>), and since FY2013 fall state university enrollment is down 2.5% (See: <http://www.mass.edu/datacenter/access/SUFallUndHC.asp>), despite an increasing population in the state. Source: Massachusetts Department of Higher Education Data Center. Available online: <http://www.mass.edu/datacenter/access/home.asp>
- ¹⁹ Castleman, B.L. & Page, L. (2014). 'Summer Nudging'.
- ²⁰ By contrast, uAspire's research evidence regarding SCC found no impacts on college enrollment for students in the Boston area, which as discussed above is uAspire's primary geographic area of service delivery. This finding is likely due to the high level of other college support programs available to youth in the area; in other words, "treatment as usual" has a similar effect as uAspire's services.
- ²¹ Castleman, B.L. & Page, L. (2014). 'Freshman Year Financial Aid Nudges'.
- ²² These numbers reflect early results measured at the June 1 priority enrollment deadline.
- ²³ AdmitHub – Case Study.
- ²⁴ Bettinger, E.P., Long, B.T., Oreopoulos, P., & Sanbonmatsu, L. (2012). 'The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment.' *Quarterly Journal of Economics*, 127(3). Available online: <http://cepa.stanford.edu/sites/default/files/Bettinger%20Long%20Oreopoulos%20Sanbonmatsu%20-%20FAFSA%20paper%201-22-12.pdf>
- ²⁵ This is the case where the end payer prioritizes financial benefit. In other cases, an end payer has made the determination, for financial or other viable reasons, that it wants to allocate funds to achieve the outcomes in question and is using PFS to drive efficiency within that spending stream. In the latter case, the question is not whether a given intervention drives savings but which intervention leads to the highest impact per dollar spent.
- ²⁶ Source: Author calculations using data from the 'Federal Pell Grant Program 2015-2016 End of Year Report' issued by the U.S. Department of Education. Available online: <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>
- ²⁷ 'Report: 2016 Enrollment Estimates.' Massachusetts Department of Higher Education. Available online: <http://www.mass.edu/datacenter/2016enrollmentestimates.asp>
- ²⁸ 'Tuition and Mandatory Fees at Massachusetts Public Colleges and Universities.' Massachusetts Department of Higher Education. Available online: <http://www.mass.edu/datacenter/tuition/appendixtuitionfeesweight7.asp>
- ²⁹ Hout, M. (2012). 'Social and Economic Returns to College Education in the United States.' *Annual Review of Sociology*. Vol. 38, pp. 379-400.
- ³⁰ Rothwell, J. (2015). 'What Colleges do For Local Economies: A Direct Measure Based on Consumption.' Available online: <https://www.brookings.edu/research/what-colleges-do-for-local-economies-a-direct-measure-based-on-consumption/>
- ³¹ Ibid
- ³² Baum, S. & Payea, K. (2004). 'The Benefit of Higher Education for Individuals and Society.' Available online: http://www.collegeboard.com/prod_downloads/press/cost04/EducationPays2004.pdf
- ³³ Comparative measures adjust success payments based on the level of differential impact demonstrated by the intervention, with the difference measured by comparing outcomes to a group not receiving services. Rate card measures, in contrast, involve success payments issued based on the total number of incidences of the project achieving a particular performance threshold, with no adjustment for the impact demonstrated among a control not receiving services.
- ³⁴ Mathematically: $\$9,000 \times 0.12 = \1080 . Note that although the impact estimates from persistence are used to help generate the rate card valuation, the rate card itself is done using the aggregate number of graduates or transfers, rather than comparing impact levels versus a control group not receiving services.

- ³⁵ Our inclusion of transfer to a four-year institution as an outcome is based on a potential project structure that includes both two-year and four-year institutions in a consortium focused on improving post-secondary attainment in a specific geographic region. This is reflective of the regional nature of enrollment at community colleges and less-selective public four-year institutions. Several HEIs in our sample in Massachusetts were pursuing regional partnerships with nearby HEIs, and Massachusetts recently developed the MassTransfer Pathway to explicitly lay out course maps for the first two years of a four-year baccalaureate degree, facilitating the community college to state university transfer pathway (see: <http://www.mass.edu/visionproject/degreegap/completion.asp>) and providing tuition breaks for students who complete these pathways (see: <http://www.mass.edu/masstransfer/macocom/home.asp>). Of note is that for the 2016 fall term over 60% of transfer students at a Massachusetts state university transferred in from a Massachusetts community college. Source: Massachusetts Department of Higher Education Data Center. Available online: <http://www.mass.edu/datacenter/collaboration/SUMatriculatedCC.asp>
- ³⁶ Detailed cost information for uAspire is not public, as such we present cost estimates at the aggregate level.
- ³⁷ Note that these are simplified cost estimates that do not factor in how actually implementing the project may impact the costs to deliver services (i.e. changes to service provider overhead costs, potentially declining marginal costs as the number of students rises, etc.).
- ³⁸ College Forward, authors' communication.
- ³⁹ Distinct from the costs derived from delivering program services are costs associated with conducting the PFS project itself. These include costs associated with the initial pilot / project ramp-up period, staffing a PFS project manager to oversee the project, and costs associated with evaluation (which comprise the majority of these expenses). For purposes of this model, we assumed PFS project costs of \$200,000 over the course of an approximately two-and-a-half-year project based on data drawn from previously launched PFS projects.
- ⁴⁰ A longer-term follow-up examining the impacts of text-based services on graduation is currently under way.
- ⁴¹ Source: Wisconsin Hope Lab, online at: <http://wihopelab.com/projects/evaluation.html>
- ⁴² See the Department of Education FERPA summary here: <https://ed.gov/policy/gen/guid/fpco/ferpa/index.html>
- ⁴³ Rothwell, J. (2015). 'What Colleges do For Local Economies.'
- ⁴⁴ Cielinski, A. & Pham, D. (2017). 'Equity Measures in State Outcomes-based Funding'
- ⁴⁵ Ibid
- ⁴⁶ Source: Snyder, M. & Fox, B. (2016). 'Driving Better Outcomes: Fiscal year 2016 state status and typology update.' *HCM Strategists*. Available online: <http://hcmstrategists.com/drivingoutcomes/wp-content/themes/hcm/pdf/2016-Report.pdf>
- ⁴⁷ Source: McGuinness, A. (2013). 'Classification of State Higher Education Structures.' *National Center for Higher Education Management Systems*. Available online: <http://highered.colorado.gov/CCHE/Meetings/2013/oct/Desktop/Agenda%20item%20II%20A%20Attachment%20A%20State%20Structures.pdf>
- ⁴⁸ See for example: 'New Massachusetts community college funding formula targets performance, growth.' *Taunton Daily Gazette*, 21 February 2014. Available online: <http://www.tauntongazette.com/article/20140220/NEWS/140229358>
- ⁴⁹ There is one international example of a PFS project in higher education. Launched in Israel in 2015, the project aims to improve persistence rates for science and engineering students from disadvantaged backgrounds at two Israeli HEIs. Details available online: <http://www.socialfinance.org.il/news-item/97/israel%E2%82%ACfirst-social-impact-bond-gets-underway> and <https://www.haaretz.com/israel-news/business/1.772041>.

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