

## Summary

The following issue brief describes the basics of Outcomes Based Funding Models (OBF), the current status of research in this area and briefly describes Oregon's own OBF model, the Student Success and Completion Model (SSCM). This brief is intended to provide the necessary contextual information for members of the formula advisory workgroup to engage in constructive deliberation.

## Background on Funding Models

Most states did not routinely provide public funding for higher education until the early 20<sup>th</sup> century. Doing so took off in earnest after World War II. In the beginning, most states sought to reimburse institutions for coursework delivered assuming that tuition and fees would cover some of the cost. This shared approach was, and still is, very common.

Enrollment-based models were the primary method by which states calculated appropriations for public universities until the 1970's. Universities received funding for either the number of students served or the number of courses delivered. Many states still use this inputs based approach to some extent.

***Inputs based models have given way to outcomes based models driven by accountability expectations and in the pursuit of better alignment with state goals.***

In the 1990's, states experimented with different approaches that focused on the inclusion of performance indicators to provide incentives for institutions to consider broader state priorities. Many of these early attempts at performance funding failed due to overly complex metrics and too little funding devoted to incentives. The classic example is South Carolina which used more than 20 different measurements. This approach quickly became unwieldy.

In the early 2000's, and especially since the great recession, more states have been transitioning to outcomes based models by which public funding is aligned with state goals such as increased educational attainment and the closing of achievement gaps. Many of these models built on the failures and successes of the earlier performance funding attempts. As of FY2019, the majority of states use an outcomes based funding approach (OBF) to appropriate at least some public funding to institutions.

**Acknowledgement** – Thanks to HCM Strategists and Research for Action (RFA) for their contributions and support in the creation of this document.

Public universities in Oregon transitioned from an inputs based model called the Resource Allocation Model (RAM) to the Student Success and Completion (SSCM) model in 2015. Both models use data on resident students only. The difference is that the SSCM relies on completed student credit hours and resident degree completions with an emphasis on completions by underrepresented students. More thorough information is included in a later section of this report.

## What is Outcomes Based Funding?

Outcomes models generally allocate a portion of the available funding on the basis of outcomes, most notably degree completions, instead of enrollment or a base plus approach.<sup>1</sup> HCM Strategists, a public policy and consulting firm, has developed a typology for highlighting the differences in current higher education OBF models.

***Outcomes based models allocate a portion of available funding on the basis of degree completions or other goal aligned outcomes.***

Type I systems are rudimentary, may be pilot efforts lacking significant funding. These systems are likely to share features with earlier performance funding models, do not include increased incentives for success of underserved populations, and are minimally linked to completion and attainment goals. Type II and III systems represent increasing degrees of development and adherence to promising practices. Type IV systems are the most robust and reflect strong alignment between a completion and attainment agenda and state policy. They include significant and stable funding, reflect institutional missions, prioritize degree/credential completion, include continuous incentives for improvement, and promote the success of underrepresented students.<sup>2</sup>

OBF systems have accelerated in growth following the great recession as an accountability tool employed by state legislatures. Currently, 32 states have, or are developing, some sort of OBF system in place for either their two or four year institutions.<sup>3</sup> As of February 2019, 20 states had such a system in place for their four-year institutions, with nine states, including Oregon, being categorized as Type IV.<sup>4</sup> Similarly, 24 states had an OBF system in place for their two-year institutions, with seven being categorized as Type IV. Oregon has an OBF in place for the four-year institutions only.<sup>5</sup>

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<sup>1</sup> [http://www.ncsl.org/Portals/1/Documents/educ/Outcome-basedFunding\\_vo2.pdf](http://www.ncsl.org/Portals/1/Documents/educ/Outcome-basedFunding_vo2.pdf) Page 3

<sup>2</sup> [http://hcmstrategists.com/promising-policy/wp-content/uploads/2019/04/DRIVING-BETTER-Outcomes-Fiscal-Year-2019-State-Status-Typology-Update\\_Final\\_Final.pdf](http://hcmstrategists.com/promising-policy/wp-content/uploads/2019/04/DRIVING-BETTER-Outcomes-Fiscal-Year-2019-State-Status-Typology-Update_Final_Final.pdf) Pages 3-4

<sup>3</sup> Ibid, Page 4

<sup>4</sup> Ibid, Page 7

<sup>5</sup> Ibid, Page 6

## What are the Best Practices?

Although relatively new, several researchers have developed research and practice-formed best practices for OBF systems. **The most important is that outcomes based funding represent a substantial portion of public funding available to institutions and not just be based on new funds.** As the Lumina Foundation writes, “To ensure sustainability, outcomes-based funding should be a part of each institution’s funding base and should not be an “add-on” that can disappear during periods of political change or economic recessions.”<sup>6</sup> This is to directly incentivize institutions to reorient themselves to increase outcomes by tying a portion of operating funding on outcomes.

**Second, well-designed OBF systems should reflect a state’s higher education priorities, with a special focus on incentivizing completions among historically underserved populations.**<sup>7</sup> Identifying these groups should be based on robust available data as well as a broad discussion of what equity means to various stakeholders in the process. This can be based on, for example, a state’s strategic plan for higher education. It can also include adjusting completions on the basis of degrees in high need areas for the state (such as STEM fields or bilingual education like in Oregon) as well as potential cost weighting by academic discipline.

**Third, and on a related point, OBF models should be developed on the basis of workgroup, or similar, agreements with all main stakeholders, including institutions, policymakers, students and faculty.**<sup>8</sup> Getting all the stakeholders involved is essential to making sure individual institutional missions are considered, that institutions buy into the plan and that academic and student perspectives are included. Such groups should also meet on a regular basis (every three to five years) to review the models, such as Oregon is now undertaking.<sup>9</sup>

**Fourth, on a more technical level, OBF policies should include elements to support smaller institutions that lack the capacity to increase enrollments and thus completions.** This could include considering completion rates rather than the raw number of completions in calculations, or determining specific programs at smaller institutions that could be funded “off the top” to ensure that small institutions, which often lack the capacity to develop

### *Best practices include:*

- *Meaningful and stable funding*
- *Alignment with state goals*
- *Accounting for different missions*
- *A focus on historically underserved populations*
- *Substantial stakeholder input*
- *Support for smaller institutions*
- *Incentives for progress and not just outcomes*
- *Limited and measurable metrics*
- *Prioritizes simplicity*

<sup>6</sup> <https://www.luminafoundation.org/outcomes-based-funding-faq>

<sup>7</sup> <https://www.obfequitytoolkit.org/m2-3-selecting-student-groups>

<sup>8</sup> <https://www.luminafoundation.org/files/resources/03-obf-strategies.pdf> Page 5

<sup>9</sup> Ibid.

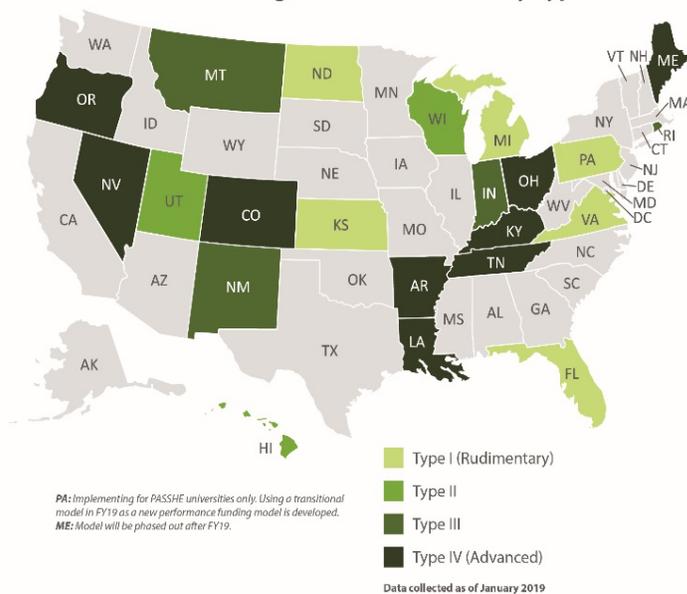
large scale programs are able to do so.<sup>10</sup> This is especially important in cases where smaller institutions might serve underrepresented populations that tend to complete at a lower rate than average.

**Fifth, metrics should be included to reward student progress toward degrees instead of just degrees themselves.**<sup>11</sup> More simply put, alongside rewards for degree completion, an OBF formula should reward course completion in the form of student credit hours earned/completed. This allows institutions to get credit for building momentum toward completion, rather than just the degree.

**Sixth and finally, the OBF model should be stable over a substantial period of time in order to allow institutions to respond to the incentives in the model.**<sup>12</sup> In the short term, institutions will be hard pressed to show quick progress; but in the longer term, they must be convinced the model will be maintained in order to justify the additional resources

necessary to increase completions. For example, institutions might not be willing to develop a new advising program targeted to underserved populations unless they are certain the OBF model will continue to incentivize such completions.<sup>13</sup>

Outcomes-Based Funding in Four-Year Sector by Type in FY 2019



The existing university funding model in Oregon, the Student Success and Completion Model (SSCM), is closely aligned with best practices and is classified as Type IV in the HCM Strategists nomenclature.

## How are Other States Implementing OBF?

Of the states that have chosen to implement outcomes based funding models, most have been developed in alignment with state goals. The proportions of funding being allocated varies widely from state to state ranging from less than 1% in Illinois to 100% in North Dakota (Type I model). Although there is no generally agreed upon target, 25% is considered high funding and

<sup>10</sup> <https://www.obfequitytoolkit.org/m3-3-constructing-obf-policies>

<sup>11</sup> <https://www.luminafoundation.org/files/resources/03-obf-strategies.pdf> Page 5

<sup>12</sup> <https://www.obfequitytoolkit.org/m4-1-institutional-checklist-for-ef>

<sup>13</sup> Ibid.

necessary to have an impact. Other funding factors need to be considered including the stability of the calculations used in the construction of the model, other revenue sources and a stop loss provision.

Most models recognize the importance of successfully serving underrepresented groups. Although there is variation in the definition of what constitutes underrepresented students. About half the states recognize year-to-year improvement in the metrics with the rest using a most recent year or average of years approach. Most states have also moved to using completed credit hours rather than enrolled credit hours as the drivers in their base funding models.

### Does OBF Drive Completions?

The key question is whether outcomes models have resulted in increased degree completions overall, especially among equity populations, such as students of color or students from low-income households. Published research suggests mixed results. While some studies show positive effects, others find no effect. This variation in effects may be connected to variation in policy design, making it difficult to generalize about effectiveness.

More recent research has found that variations in policy design and implementation (Type I-IV) is associated with variations in the effects of OBF.<sup>14</sup> The variation in effects may also be connected to the length of time a policy has been fully implemented. Researchers have found positive impacts in later years, suggesting that policy response takes time and outcomes should be assessed after a reasonable period of implementation.<sup>15 16</sup>

The effect of OBF on institutional behavior is well documented.<sup>17</sup> OBF influences institutions through financial incentives, awareness of state priorities, and awareness of institutional performance.<sup>18</sup> Examples of specific responses include an increased focus on outcomes, demonstrated by the reformation of academic policies such as developmental education, the implementation of degree pathways and the expansion of certificate offerings, revisions to strategic plans, and increases in institutional support staff. Other responses include altering advising and counseling systems, implementing early academic alert systems, changing tutoring and orientation programs, and the increased use of data analytics.<sup>19 20</sup>

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<sup>14</sup> Amy Li and Alec Kennedy, "Performance Funding Policy Effects on Community College Outcomes: Are Short-Term Certificates on the Rise?" *Community College Review* (2017).

<sup>15</sup> Nicholas Hillman, Alisha Hicklin Fryar, and Valerie Crespín-Trujillo, "Evaluating the Impact of Performance Funding in Ohio and Tennessee" *American Educational Research Journal* (2017).

<sup>16</sup> Nicholas Hillman, David Tandberg, and Jacob Gross, "Performance Funding in Higher Education: Do Financial Incentives Impact College Completions?" *The Journal of Higher Education* (2014).

<sup>17</sup> <https://www.obfequitytoolkit.org/m2-3-selecting-student-groups>

<sup>18</sup> Kevin Dougherty and Associates, "Implementing Performance Funding in Three Leading States: Instruments, Outcomes, Obstacles, and Unintended Impacts." *Community College Research Center* (2014).

<sup>19</sup> Amy Li and William Zumeta, "Performance Funding on the Ground: Campus Responses and Perspectives in Two States." *TIAA Institute* (2016)

<sup>20</sup> <https://www.obfequitytoolkit.org/m2-3-selecting-student-groups>

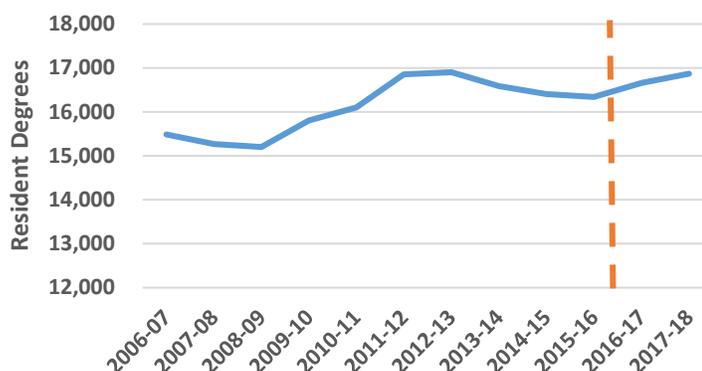
Research has also shown the need to support institutions, especially under-resourced institutions during implementation, and to monitor the model for unintended consequences such as reduced academic quality and restricted access.<sup>21</sup> Research has also shown that premiums, or additional bonus funding, for outcomes achieved by underrepresented students demonstrates a state’s commitment to equity and counteract incentives to reduce access.<sup>22</sup>

## What has the Oregon Experience Been?

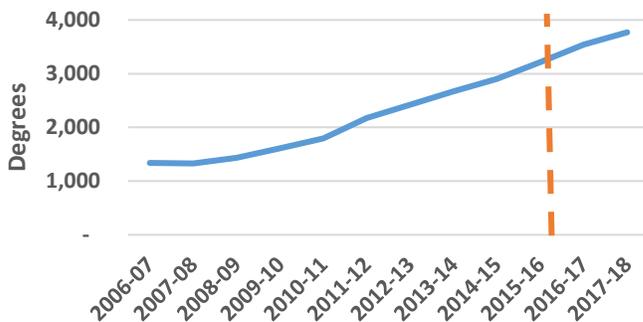
The robust model Oregon implemented is so relatively new that most of the four-year institutions, to which the model applies, have not yet had enough time to fully react. The model was implemented in 2016 but fully enacted in 2019. They are building out student support services in targeted areas and creating the programming necessary to engage with targeted populations. A more nuanced conversation about the impact on enrollment, retention and graduation rates is included in the last section of the brief.

Initial data shows improvement in completions. The total number of resident degrees has increased 3.2% since the implementation of the OBF as noted in figure 1. This includes all degrees across all disciplines to Oregon residents at all the public universities. Enrollment has dropped 2.5% during the same time period.

**Figure 1: Total Resident Degrees Awarded**



**Figure 2: Degrees Awarded to Underrepresented Students**



Initial data also shows progress relative to increasing outcomes for underrepresented students. The number of degrees awarded to underrepresented students since implementation has increased 17.2%. The enrollment of underrepresented students has increased during that same time period explaining some of the increase.

<sup>21</sup> Kevin Dougherty and Associates, “Implementing Performance Funding in Three Leading States: Instruments, Outcomes, Obstacles, and Unintended Impacts.” Community College Research Center (2014).

<sup>22</sup> Robert Kelchen, “Do Performance-Based Funding Policies Affect Underrepresented Student Enrollment” (2018).

Although degrees for underrepresented students were trending upward before the implementation of OBF, as noted in figure 2, it is likely some of the progress is due to the successful adaptation of institutional programming following OBF such as increasing the number of student advisors and implementing targeted support services such as multicultural support centers. So while the total number of completions has increased, and the number of completions for underrepresented students has increased, it is difficult to correlate those increases to the implementation of the model. More years under the model will be needed before its effectiveness can truly be evaluated.

### How does the Oregon Model work?

Oregon’s Student Success and Completion Model (SSCM) is comprised of three funding categories including mission differentiation funding, activity based funding and outcomes based funding.

**Mission Differentiation (MD) Funding** supports the unique regional, research and public service missions and activities of each university. It represents “line item” funding for services, programs or general operations. The current total in FY2020 is \$69.7 million for 32 different programs which represents 17% of the \$410.1 million available.

Data	Calculation
Historical funding levels for line items as listed in rule  Dual Credit completions	Allocation is “off the top”  Based on historical funding levels adjusted for inflation (CPI)  Includes resources for Dual Credit completions

**Activity-Based Funding** distributes resources based on student credit hour (SCH) completions of Oregon resident students at undergraduate and graduate levels. This is similar to the primary component of the former university funding model which was retired following the 2015 fiscal year. The current total in FY2020 is \$136.2 million which represents 33% of the total available.

Data (3 year average)	Calculation
SCH completions by CIP code (program area) and student level	A defined percentage (40%) of non-MD funding is distributed for SCH completions  Distributes resources based on SCH completions at each institution utilizing program- and course level-specific cost weighting system

The calculation of funding is based on weighted credit hours. All resident student completed hours are collected for all levels of instruction across all disciplines. Cost weights are then applied for each level/discipline combination. An example calculation for an institution, using hypothetical data, is included in figure 3.

**Figure 3: Example Calculation for an Institution.**

Course Level	Academic Discipline	Avg Credit Hours	Cost Weight	Weighted Hours
Freshman / Sophomore	Engineering	5,000	<b>X</b> 1.80	= 9,000.0
Junior / Senior	Biology	2,500	1.61	4,025.0
Master's	Education	2,250	1.45	3,262.5
Doctoral	History	1,100	3.27	3,597.0
<b>Total Points for Institution</b>		<b>10,850</b>		<b>19,884.5</b>

All the weighted hours for all institutions are summed and divided in to the total available funding to calculate a dollar value per weighted hour. The number of weighted hours for each institution is then multiplied by that dollar value per weighted hour to calculate the funding for each institution as displayed in figure 4.

Using FY2020 data, the dollar value per weighted hour calculation is:

$$\text{\$136.2 million} / \text{3,950,815 weighted hours} = \text{\$34.46 per weighted hour}$$

**Figure 4: Calculation of Funding for Activities Based Distribution**  
(Weighted Hours X \$34.46 = Distribution)

Institution	Weighed Hours	FY2020 Distribution
EOU	102,004	\$3,515,409
OIT	173,967	\$5,995,532
OSU	1,376,749	\$47,447,702
PSU	1,059,697	\$36,520,955
SOU	160,205	\$5,521,194
UO	850,931	\$29,326,130
WOU	227,262	\$7,832,265
<b>TOTALS</b>	<b>3,950,815</b>	<b>\$136,159,187</b>

**Outcomes-Based Funding** rewards degree and certificate completions by Oregon resident students. Completions by underrepresented students (underrepresented racial/ethnic minority, low-income, rural and veteran status) and those in academic disciplines in high-demand and high-reward fields (STEM, Health, Bilingual Education) are provided additional resources by the allocation formula. The current total in FY2020 is \$204.2 million which represents 50% of the total available.

Data (3 year average)	Calculation
Degree and graduate certificate completions by level and CIP code for residents only  Completions by transfer status (BA/BS only)  Completions by underrepresented students: - Low-income student (Pell Grant) - Underrepresented racial/ethnic minority student - Rural student - Veteran student  Completions in priority degree areas: - STEM (science, engineering, math) - Healthcare - Bilingual Education	A defined percentage (60%) of non-MD funding is distributed for outcomes  Degrees at all levels are funded: BA/BS through PhDs, including graduate certificates (PhDs for non-resident students are treated like residents); degrees are weighted by level  Cost-weighting adjustments are made to reflect program duration and type (CIP code)  Additional weighting awarded for BA/BS degrees earned by underrepresented students and degrees in high-demand and high-reward areas  Degrees awarded to CC transfer students are discounted relative to non-transfer students

The calculation of funding is based on outcomes points. All resident student degrees completed (and non-resident doctorates) are collected for all levels of instruction across all disciplines. Adjustments are then applied:

- Degree weights are applied by type of degree: Baccalaureate degrees – 2.0. Doctoral degrees – 1.4. Master’s and professional degrees – 1.0.
- Cost weights are applied for each level/discipline combination. Transfer discounts are applied for students who transferred from a community college.
- An area of study bonus is applied for STEM, healthcare and bilingual education degrees.
- Bonuses for targeted populations are applied as noted above.

An example calculation for an institution, using hypothetical data, is included in figure 5.

**Figure 5: Example Calculation for an Institution.**

Type of Degree	Discipline	Average No of Degrees	Degree Weight	Cost Weight	Area of Study Bonus	Transfer Discount	Targeted Population	Points
Non-transfer bachelor's	Engineering	1.00	X 2.00	X 1.85	+ 20%	X 0%		= 4.44
Transfer bachelor's	History	1.00	2.00	1.00	0%	37.5%		1.25
Master's	Education	1.00	1.00	1.27	0%	0%		1.27
Doctoral	Biology	1.00	1.40	2.86	20%	0%		4.80
Underrepresented		1.00						0.8
							<b>Score:</b>	<b>12.56</b>

All the outcomes points for all institutions are summed and divided in to the total available funding to calculate a dollar value per point. The number of points for each institution is then multiplied by that dollar value per point to calculate the funding for each institution as displayed in figure 6.

Using FY2020 data, the dollar value per weighted hour calculation is:  
**\$204.2 million / 44,667 points = \$4,572.47 per point**

**Figure 6: Calculation of Funding for Outcomes Based Distribution**  
 (Points X \$4,572.47 = Distribution)

Institution	Points	FY2020 Distribution
EOU	1,212	\$5,540,545
OIT	2,022	\$9,244,295
OSU	15,038	\$68,761,171
PSU	13,063	\$59,730,976
SOU	1,847	\$8,445,890
UO	9,001	\$41,157,810
WOU	2,484	\$11,358,096
<b>TOTALS</b>	<b>44,667</b>	<b>\$204,238,783</b>

**Figure 7: FY2020 Formula Funding by Institution**

<b>Institution</b>	<b>Mission Differentiation</b>	<b>Activities Based Funding</b>	<b>Outcomes Based Funding</b>	<b>TOTAL</b>
EOU	\$11,946,111	\$3,515,409	\$5,540,545	\$21,002,065
OIT	\$14,103,219	\$5,995,532	\$9,244,295	\$29,343,046
OSU	\$18,120,440	\$47,447,702	\$68,761,171	\$134,329,313
PSU	\$4,317,926	\$36,520,955	\$59,730,976	\$100,569,857
SOU	\$8,976,721	\$5,521,194	\$8,445,890	\$22,943,805
UO	\$4,583,479	\$29,326,130	\$41,157,810	\$75,067,419
WOU	\$7,634,443	\$7,832,265	\$11,358,096	\$26,824,804
<b>TOTALS</b>	<b>\$69,682,339</b>	<b>\$136,159,187</b>	<b>\$204,238,783</b>	<b>\$410,080,306</b>

### How do the Principles Align with the Mechanics of the Formula?

The funding model is designed to:

1. Reflect the Commission’s strategic plan and Equity Lens;
2. Focus on student access and success with an emphasis on underrepresented populations;
3. Encourage educational attainment in high-demand and high-reward disciplines;
4. Recognize and reward distinctions in institutional mission and scope;
5. Recognize the cost differences in various academic program areas;
6. Use clearly defined, currently available data; and
7. Maintain clarity, simplicity and stability.

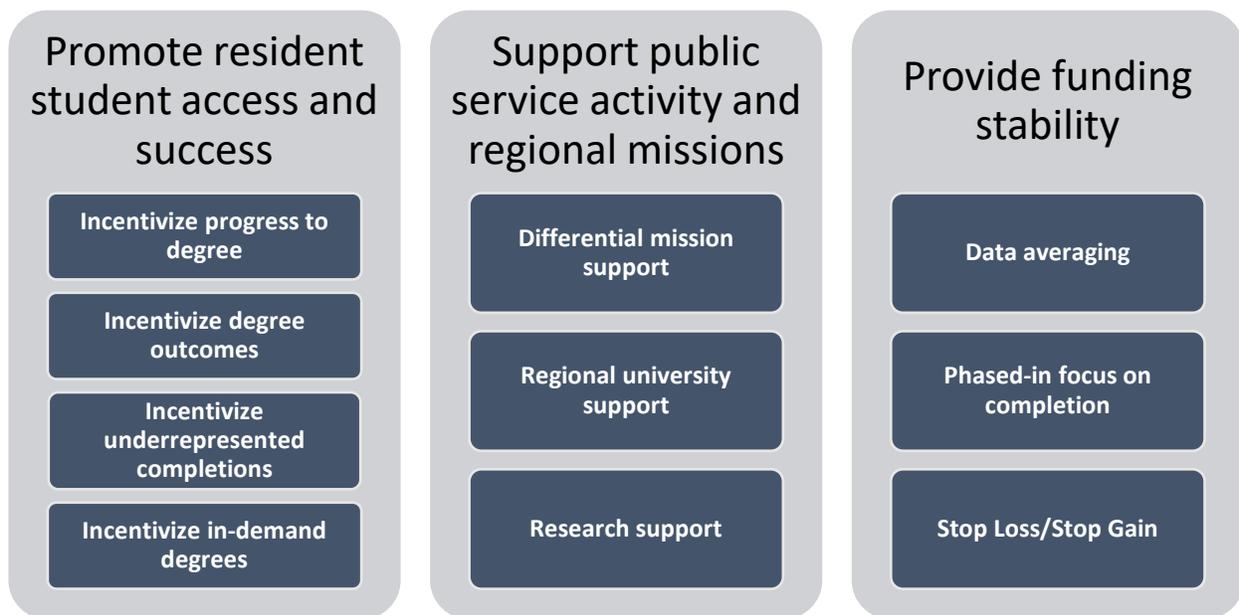
The principles to which the model aspires are pursued through different mechanisms as illustrated in figure 8. Resident student access and success is promoted by incentivizing progress toward a degree through the funding of completed credit hours weighted to account for the differing costs of academic programs. Engineering for example costs more than liberal arts since lab work is required with expensive equipment.

The regional missions of the institutions are recognized through mission differential funding. Support for smaller institutions is included as well as for research activity. Funding for dual credit programs and various public service programs are included in the mission differentiation funding portion of the formula.

Funding stability is accomplished by averaging data over time to smooth out volatility and by including a phased in approach with stop loss/stop gain governors. During the phase-in process,

the Stop Loss mechanism prevented any institution from receiving less in current year allocations than a pre-determined percentage of the prior year. The Stop Loss mechanism is no longer active. The Stop Gain mechanism prevents any institution from receiving more in current year allocations than a pre-determined percentage increase from the prior year. And the transition to the outcomes model was phased in over a number of years to ensure a smooth transition.

**Figure 8: Principles of the SSCM.**



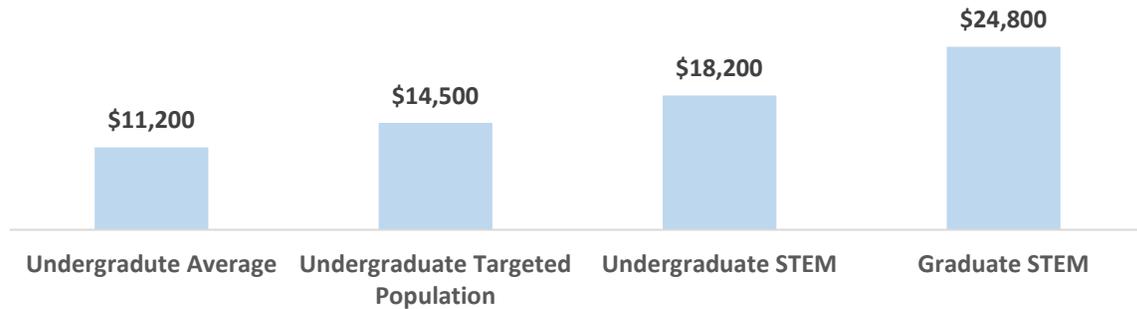
### How does the Formula Incentivize Underrepresented Student Completions?

The success of underrepresented students is incentivized by adding additional weighting for degrees earned by students in targeted populations. There are four categories of targeted populations. Low income students are one as measured by Pell Grant eligibility. Racial minorities are another. Rural students are another as defined by county of origin. Rural counties are defined by population. And veterans are the final group as defined by service record.

The weights can stack for students who demonstrate multiple characteristics. For example, a rural veteran student who graduates with an engineering degree would demonstrate three characteristics.

The approximate degree values included in Figure 9 below provide indication of the magnitude of the additional weighting. The completion of an underrepresented student can generate

**Figure 9: Various Degree Values**



approximately 30% more funding for an institution through the formula. That funding is often needed to provide additional support services to students to maintain momentum on the path to graduation.

### How much Funding is dedicated to Outcomes?

**Over time, the percentage of total funding dedicated to completions has increased by design from less than 1% in the old model to 49% in the new model as fully implemented.** The mission differential items are funded first, out of the total funding available. The funding for them increases by the lower of the rate of inflation or the rate of growth in the total available funding. So, the mission differential portion of the total funding available should be stable going forward and is currently 17% of the total.

The funding associated with the formula has increased by a total of \$102 million (or 37%) in the past few years. The allocation by institution has been largely stable as measured by the percentage of the total available funding received by each institution as noted in figure 10 below. The old funding model (RAM) was enrollment based. And the new model was fully implemented just recently during fiscal year 2019.

**Figure 10: Allocation by Institution**

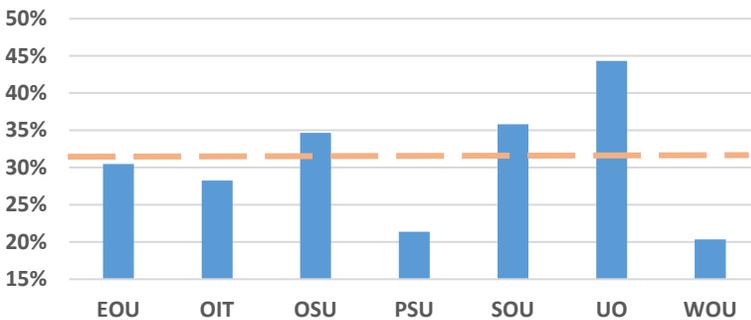
Institution	FY 2015 - RAM		FY 2019 - SSCM		% Change	Nominal Change in Funding
	\$	%	\$	%		
Eastern Oregon University	16,227,400	5.9%	20,186,725	5.4%	-0.6%	24%
Oregon Tech	20,073,770	7.3%	27,455,305	7.3%	0.0%	37%
Oregon State University	90,541,526	33.1%	121,751,892	32.4%	-0.7%	34%

Portland State University	61,026,998	22.3%	91,390,178	24.3%	2.0%	50%
Southern Oregon	16,703,217	6.1%	21,270,175	5.7%	-0.4%	27%
University of Oregon	52,352,221	19.1%	69,090,989	18.4%	-0.7%	32%
Western Oregon University	16,946,716	6.2%	24,673,012	6.6%	0.4%	46%
<b>TOTALS</b>	<b>273,871,848</b>	<b>100%</b>	<b>375,818,276</b>	<b>100%</b>	<b>0.0%</b>	<b>37%</b>

## What Factors affect the Funding Received by each Institution?

The funding received by each institution is affected by a number of factors including enrollment of resident versus nonresident students, the success of underrepresented students, the mix of academic programs from which students graduate and the transfer of students from other institutions. The data feeding in to the formula is averaged over three years.

**Figure 11: Percentage of Degrees Awarded at each Institution to Nonresident Students in 2017-18**



**With the exception of doctoral degree completions, the formula includes data for resident students only.** An institution does not receive credit under the formula for nonresident enrollments. However, doctoral degree completions are included in formula data. Any completions earned by non-resident students are not a part

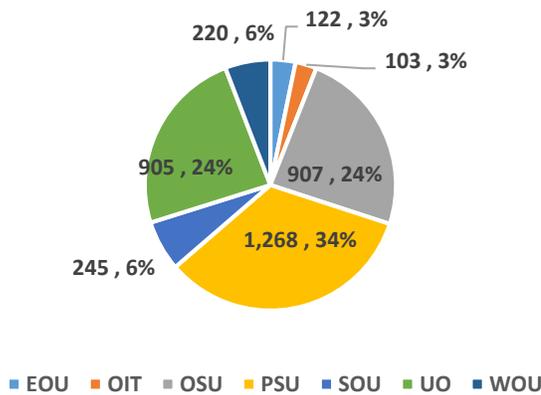
of the formula calculations.

Those institutions with a larger than average population, and therefore completions, of nonresident students will likely receive below average distributions under the current formula. The average portion of completions of nonresident students is 32%. The potential impact is felt by those institutions above the dotted line, in figure 11.

Institutions with higher than average nonresident student populations, mainly UO, OSU and SOU, are all affected. The policy implication is that state funding should be dedicated to the support of state residents. Institutions are expected to charge a nonresident tuition differential to support nonresidents. That concept leads to much higher tuition charged to nonresident students with a higher differential still for international students in some cases.

One complicating factor in this conversation is Oregon’s participation in WICHE which is the Western Interstate Commission for Higher Education. It allows nonresident students to pay 150% of resident tuition in Oregon. Oregon residents are allowed to do the same in other states. This can keep the institution from collecting enough revenue on some nonresident students to cover the cost of education.

**Figure 12: Number of Degrees Awarded to Underrepresented Students in 2017-18**



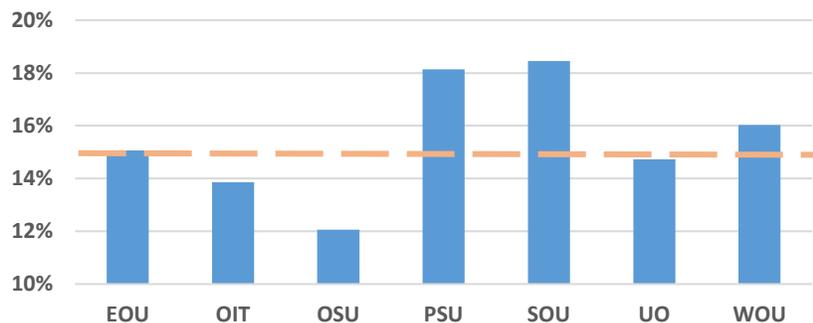
**The formula places an emphasis on access and success of under-represented students.**

Underrepresented students in this context includes low-income, racial and ethnic minorities, rural students and veterans. Weights are added for degrees awarded to under-represented students. Figure 12 shows the total number of degrees awarded to underrepresented students in academic year 2017-18. A full 82% of those degrees are awarded at the three largest institutions (UO, OSU and

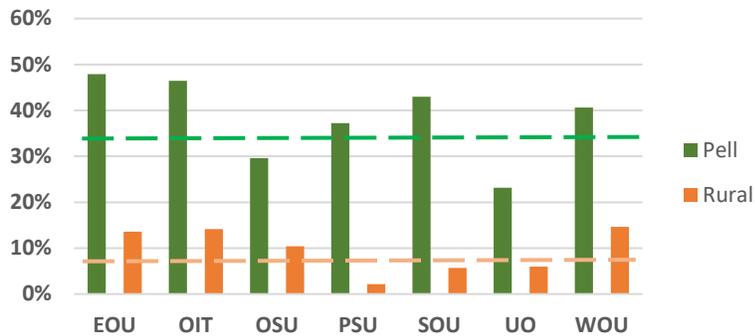
PSU). By comparison, 82% of all degrees are awarded by these three institutions.

The average percentage of the degrees awarded at each institution to under-represented students is 15%. Those institutions awarding more than that, as displayed in figure 13, more than likely benefit from a roughly 30% increase in the value of each degree awarded to those students. This is a bonus for PSU, SOU and WOU.

**Figure 13: Percent of Degrees Awarded at each Institution to Underrepresented Students in 2017-18**



**Figure 14: Percentage of Degrees Awarded at each Institution to Pell and Rural Students in 2017-18**

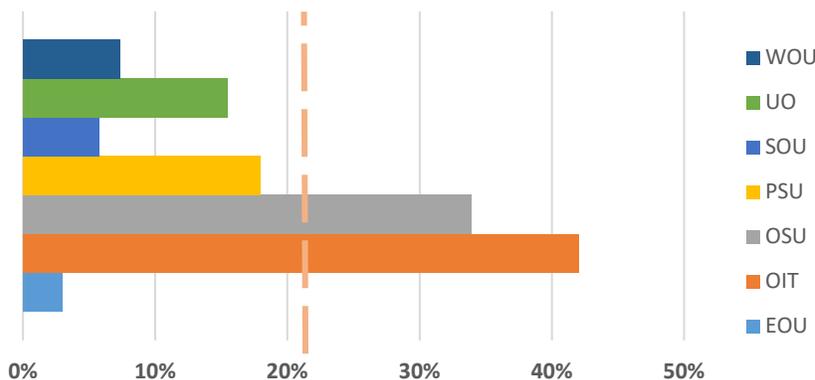


**Students who are eligible for Pell grants and who are from rural counties are considered under-represented.** The formula includes incentives for these populations of students just like it does for other under-represented students. Figure 14 shows the percentage of degrees awarded at each institution for students who are Pell grant eligible and for students from

rural counties. The respective averages are noted by dotted lines. Those institutions above the averages potentially benefit from additive funding associated with degrees awarded to students with those characteristics.

**The formula includes incentives for in-demand degrees.** The current formula defines in-demand degrees largely as STEM related degrees in science, mathematics, technology, engineering and health. A full 90% of those degrees are produced at the three largest institutions (UO, OSU, and PSU) with 48% of the total in 2017-18 produced by OSU alone. PSU is the next highest with 24% of the state total.

**Figure 15: Percentage of Degrees Awarded at each Institution in STEM Fields in 2017-18**



The average percentage of STEM degrees awarded at each institution is displayed in figure 15. The average is 21%. Those institutions that produce more relative to other institutions will benefit by the incentives for producing those degrees. OIT and OSU produce 42% and 34% respectively of their degree totals in

STEM related fields including healthcare.

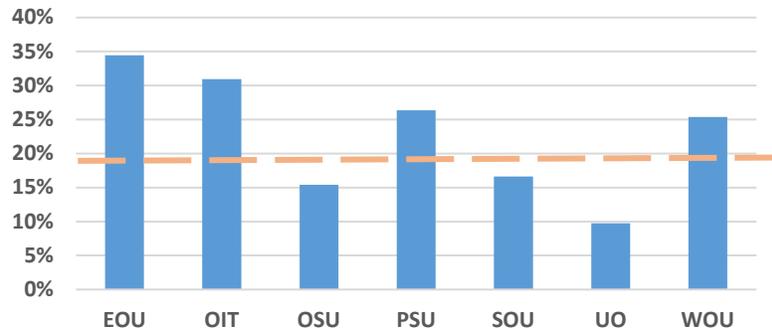
**In the formula degrees awarded to community college transfer students are discounted relative to non-transfer students.**

This means a university that graduates a community college transfer student will earn less for that completion than they would for a student who started and graduated from the same university.

About 40% of all the degrees

awarded to community college transfer students are conferred by PSU. The percentage of total degrees awarded that are community college transfer students is 19%. Institutions that award relatively more degrees than average to transfer students are potentially affected by the discount. Figure 16 shows PSU is potentially affected with SOU and OSU closely behind. The discount only applies to transfers from Oregon community colleges. The discount does not apply to students transferring from other universities or private institutions.

**Figure 16: Percentage of Degrees Awarded at each Institution to CC Transfer Students in 2017-18**

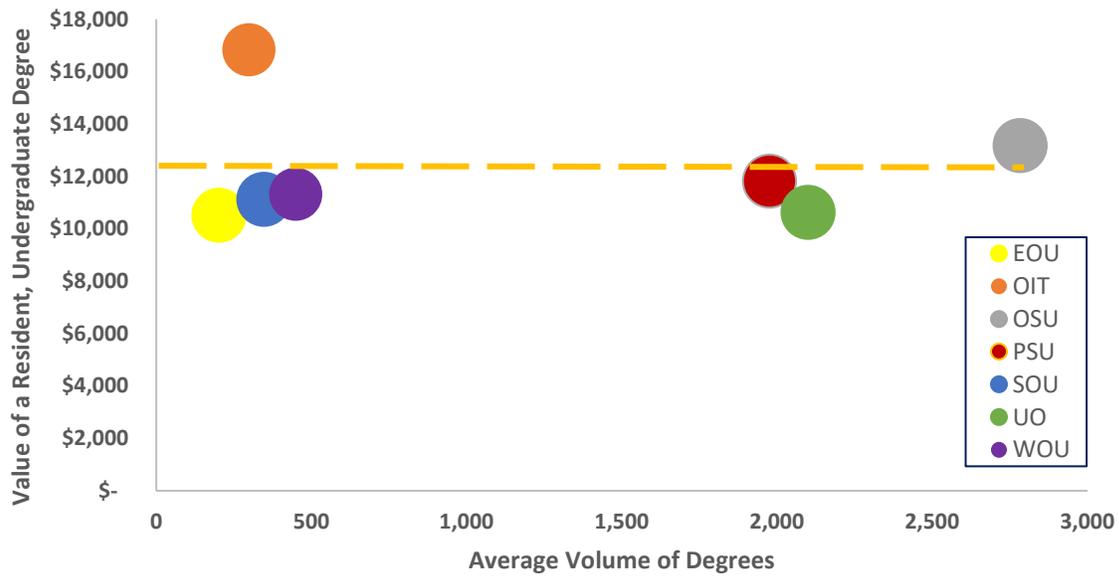


**How much Funding on Average does each Institution receive for a Resident, Undergraduate Degree?**

The average funding in the formula received by each institution for a resident, undergraduate degree as included in figure 17 averages just over \$12,000. As discussed in the prior section, the funding received by each institution is affected by a number of factors in the calculation of the distribution of the formula. So as a benchmark, the chart in figure 17 shows the average funding received by the institution for each resident, undergraduate degree conferred.

The data in the chart is listed below figure 17. The average value varies somewhat but across all the institutions is just over \$12,000. OIT is the highest at \$16,850 with EOU being the lowest at \$10,533. And this again is largely based on academic program mix and other factors as previously noted.

**Figure 17: Average Value of a Resident, Undergraduate Degree**



University	Average Volume of Degrees	Average Value of a Degree	% of Total Degrees
EOU	201	\$ 10,533	2%
OIT	298	\$ 16,850	4%
OSU	2,783	\$ 13,194	34%
PSU	1,976	\$ 11,824	24%
SOU	346	\$ 11,139	4%
UO	2,099	\$ 10,643	26%
WOU	448	\$ 11,331	6%
<b>All</b>	<b>8,151</b>	<b>\$ 12,083</b>	<b>100%</b>

## Appendix

### Historical Degree Totals Figures 1 and 2

Year	Total Resident Degrees	Degrees Awarded to Under-represented Students
2006-07	15,489	1,337
2007-08	15,267	1,329
2008-09	15,201	1,431
2009-10	15,805	1,611
2010-11	16,103	1,797
2011-12	16,857	2,173
2012-13	16,903	2,422
2013-14	16,585	2,672
2014-15	16,407	2,905
2015-16	16,343	3,216
2016-17	16,656	3,545
2017-18	16,872	3,770

### Degree Data for FY2017-18 Figures 11 through 16

Institution	Total Degrees	Non-Resident	STEM	Under-represented	Rural	Pell	CC Transfer
EOU	810	247	24	122	110	388	279
OIT	743	210	312	103	105	345	230
OSU	7,520	2,608	2,548	907	782	2,229	1,160
PSU	6,992	1,493	1,255	1,268	151	2,603	1,843
SOU	1,328	476	76	245	76	571	221
UO	6,143	2,723	949	905	369	1,424	598
WOU	1,372	279	101	220	201	557	348
<b>TOTALS</b>	<b>24,908</b>	<b>8,036</b>	<b>5,265</b>	<b>3,770</b>	<b>1,794</b>	<b>8,117</b>	<b>4,679</b>