Oregon Higher Education Landscape Study

National Center for Higher Education Management Systems

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Prepared for the Oregon Council of Presidents and the Oregon Community College Association

Executive Summary

Oregon is faced with many problems that require public investment if those problems are to be successfully addressed and how thriving the state will be in the future. Among the most pressing issues are transportation, the provision of social services, stewardship of the environment and the reduction of contributions to global warming, provision of a health care safety net for a rapidly aging population, public safety, and enhanced economic opportunity for its communities among them. There will inevitably be increased demands on the public purse—this in a state where the per capita income is below the national average, where income taxes are the primary source of state revenues, and where there is little appetite for increasing tax rates to pay for needed services. The way out of this dilemma is to increase the income tax base of the state—to increase the numbers of workers in the state who have high-paying jobs. The state's past focus on workforce development is commendable and its current emphasis on closing equity gaps is both moral and essential in a rapidly diversifying population. As important as these efforts are, they mostly focus on restocking and diversifying the workforce for the current shape of Oregon's economy—the workforce needed to fill the existing mix jobs that have so far left Oregon below the national average in per capita income. Oregon badly needs to invest, not just in workforce development, but also in work*place* development; it needs to invest in activities that will create the jobs of the future. The state's colleges and universities are the engines that will fuel such developments. Other states that have drawn this conclusion have mounted a sustained effort to leverage the public colleges and universities; many of these are threatening to leave Oregon increasingly behind.

This report presents data that demonstrate that:

- Oregon's public institutions are caught in a financial bind. They must either grow enrollments or increase tuition revenue, or both, to meet rising educational costs that, because of rapidly rising personnel costs (especially benefits), are not entirely within their control. In comparison to other states, Oregon underinvests in higher education; this is particularly the case in its funding of four-year institutions. Worse, demographic decline among traditional college-age students will cause this bind to become more constricting, and the combination of these factors will intensify the competition among the institutions in a manner that hinders the state's ability to achieve its goals for postsecondary education related to attainment, equity, and affordability.
- With respect to demographic changes, the state will experience a rapidly aging population; the number of young people graduating from high school is projected to remain essentially stable over the next 15 years. Conditions in states from which Oregon universities recruit out-of-state students are even more discouraging. The numbers of high school graduates in these states are projected to decrease substantially. The only avenue through which Oregon colleges and universities can (slightly) grow enrollments is to improve the proportion of high school students who graduate from high school and to increase the college participation rates of both high school graduates and adults, both areas where Oregon lags the country and where there is room for improvement. But the bottom line is that tuition revenues alone will not pay for the investments needed to create a better Oregon.

- The high reliance on tuition to fund the state's higher education enterprise makes maintaining affordability for students a key state priority—it is in the state's best interest to ensure that students of all types can afford to go to college and stay in college long enough to complete a program of study. The evidence presented in this report indicates that the existing state student aid programs are generally well designed to meet the needs of recent high school graduates. However, they do not meet the needs of adults returning to college, often on a part-time basis. This is a population that must be better served in order to achieve a better Oregon.
- A better Oregon must also be a more equitable Oregon. Social justice demands that the playing field be leveled and that students from marginalized populations be given the assistance they need to reap the benefits accorded to their more advantaged peers. Beyond the moral imperative, the economic future of the state depends on this population of students becoming better educated. With the large cohort of older Oregonians aging out of the workforce, employers will need an infusion of new, skilled workers. Those workers will have to come from a population that is increasingly diverse. The success of underrepresented students will be key to the success of Oregon employers.
- Oregon also depends on individuals who come to Oregon from other states. Major contributors to this inflow of talent are Oregon's public institutions, which educate students from other states who, after graduation, stay in the state to work. There is scant recognition of the importance of these individuals to the workforce development needs of the state, nor of the roles that colleges and universities play in "recruiting" these workers to the state. A comprehensive workforce development strategy should redress this failure.
- Oregon is lingering in a natural resource and industrial age-based economic model. With few exceptions, it has not evolved to being a technology-based economy. While the political rhetoric reflects a desire to move in that direction, the concrete actions needed to put the state on a trajectory that would yield these results are, for the most part, not being taken. There is no statewide economic development plan that would point the way to the necessary capacity-building. The strategic plan created by the state's Higher Education Coordinating Commission (HECC) establishes some priorities from the perspective of a higher education agency, but it is not a substitute for a plan that provides guidance regarding the future of the state.
- Colleges and universities are the state's greatest assets upon which to build the new and better Oregon. But it will take more investment—and more targeted investment than the state has heretofore been willing to make. Community colleges are a key provider of the workforce for established employers and are well known for their ability to rapidly respond to evolving workforce needs. In particular, it will require making college affordable for the many older, part-time students who make up a large portion of community college enrollments. Meanwhile, the state's universities, particularly the research universities, must be central players in creating the state's new economy, and they require adequate support and appropriate, well-coordinated priming and inducements to do so. The evidence provided in this report indicates that the research infrastructure in fields key to economic development is insufficient.

- Colleges and universities will have to put skin in the game, principally by engaging in collaborative activities—both administrative and academic—that will produce better service at lower cost. The conversations held during the course of this project revealed a reservoir of willingness among institutions to engage in such activities (and numerous examples of on-going collaborative activities), but also a lack of the infrastructure necessary to make collaborating both easier and more worthwhile for participants than it currently is. Obtaining the full benefits from collaborative efforts will require an active state role in convening potential participants (a role that could be played by HECC) and state support to cover some of the start-up costs.

With these observations in mind, this report points to actions that the state and its public institutions can take that will put the state's higher education assets in a strong position to contribute to achieving these broader statewide and societal goals. These actions include:

- Taking steps to ensure that the state's policy leaders and its institutions of higher education are pursuing a common and widely agreed upon set of priorities for improving the economy and quality of life for the benefit of the residents of Oregon
- Continuing the emphasis on achieving equity in access to postsecondary education and in the success of students.
- Investing in creating the institutional infrastructure (new educational programs, research capacity, etc.) needed to achieve these goals.
- Rebalancing the funding responsibilities for higher education in the state so that the students pay a smaller share and the state a larger share.
- Better linking allocation of resources to state goals.
- Ensuring that affordability for students is enhanced—not just for recent high school graduates, but for part-time adult students as well.
- Improving the efficiency with which programs are delivered and institutions are operated. Particular emphasis should be placed on sharing of services to accomplish this objective.

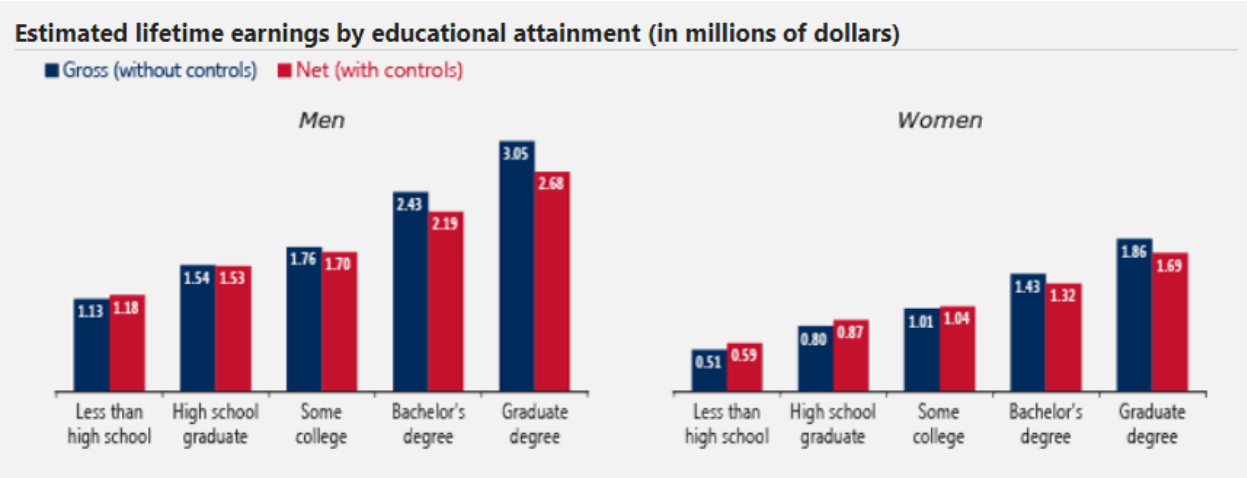
Introduction

Oregon, like many other states, is facing a series of problems that are converging to threaten the economic fortunes and the quality of life of its residents—a partial list includes a weakening of civil society, economic bifurcation, persistent gaps in opportunity (across varied dimensions such as race/ethnicity, urban/rural settings, income), a growing climate crisis, a rapidly aging population and its implications for an available workforce, and competition from other states and nations in the arenas on which the state's economy rests. While the specifics may differ, no state is immune from a litany of similar problems demanding attention, and many of them are floundering in search of solutions. A very few—Tennessee, Kentucky, and Virginia among them—have taken steps to more systematically address their major societal challenges. Their actions start with a clear-eyed understanding of the problems they face and an effort to build consensus around the importance of addressing those problems, then focusing the major assets and tools available to state government on developing and implementing solutions. Notable among the assets deployed in each instance of a successful and innovative state response has been the state's public colleges and universities. These institutions have been recognized for the central—and unmatched—role they play in preparing the skilled workforce needed to meet the demands of a competitive economy; in expanding and diversifying the economy through R&D activities that yield new products and services; in developing new ways to attack bedeviling problems such as persistent inequality and challenges to public health and the environment; and in providing opportunities to individuals that help them become socially mobile. Key to progress in all instances has been leadership of elected officials who have used their bully pulpit to draw attention to the handful of key issues, consistent attention to the issues over a long period of time, and wise investments of state resources (primarily to education) to create and sustain the necessary capacity to provide the sought-for benefits.

Oregon has periodically demonstrated the capacity to develop and enact a future-oriented statewide vision, one that connects the state's success in stimulating improvements in residents' quality-of-life and in living out core values such as environmental stewardship. New investments in transportation infrastructure and reform in land use policies and practices over the past decades are examples where questions about the kind of state Oregon wants to be, posed by diverse stakeholders including business and the media, led to creative and Oregon-specific solutions that spurred changes to move the state closer to realizing that vision. Higher education, particularly the state's investment in its public institutions (and in financial aid that supports its private institutions as well), is a vital ingredient to Oregon's future. It is timely for the state to muster the political will to shape a transformative vision for Oregon's competitive future—a vision that, by necessity, effectively leverages the vast capacity of the state's higher education assets in its achievement. At the same time, Oregon's higher education institutions have a role to play in driving innovation both within their own operations, across institutional boundaries, and beyond to better serve students; in recognizing their fellow institutions strengths and collaborating with them to meet public needs; and in elevating relevance in their services to students, their communities, and the state.

The arguments in favor of deliberately harnessing Oregon's public colleges and universities, with attendant investments, to achieve this vision are clear and indisputable. The benefits of an educated citizenry to both individuals and the larger society are well established. Individuals with education beyond high school have considerably higher incomes than those who have not earned a college degree or obtained an industry-recognized certification (Figure 1). More highly educated individuals enjoy the many qualities of life benefits that are associated with higher incomes.

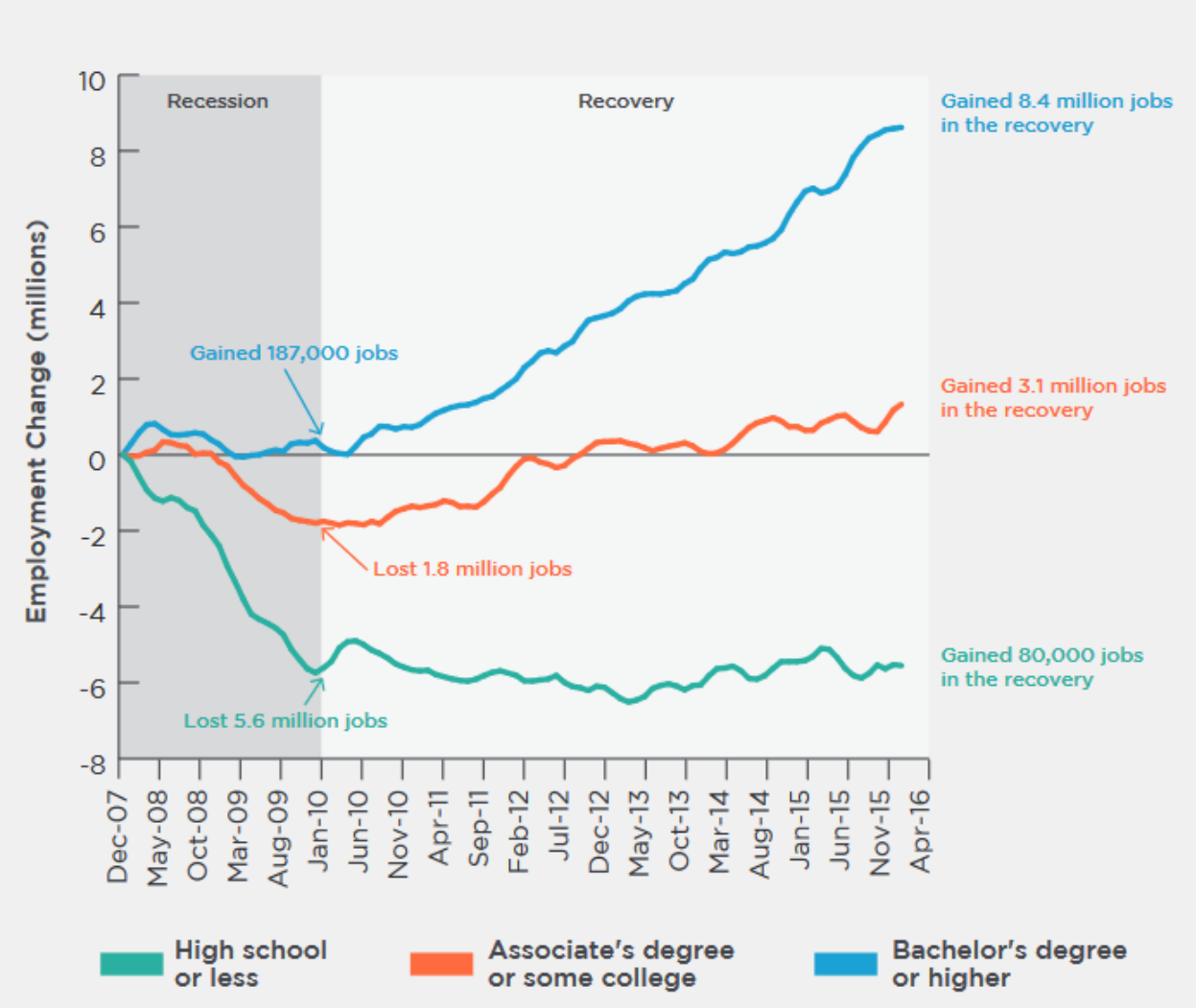
Figure 1. Earnings by Educational Attainment



Source: Tamborini, Christopher R., ChangHwan Kim, and Arthur Sakamoto. 2015. "Education and Lifetime Earnings in the United States." *Demography* 52: 1383–1407.

Equally important, the more highly educated an individual is, the less likely they are to suffer economic reversals when the country falls into a depression—education is a resilience insurance policy. During the Great Recession, baccalaureate degree holders continued to be employed; they did not lose their jobs (Figure 2). The number of employees with associate's degrees who lost their jobs was relatively small and employment rebounded quickly after the bottom of the recession. Those without a postsecondary education suffered major employment losses—and many of the jobs lost were never recovered.

Figure 2. Labor Market Impacts During and After the Great Recession by Educational Attainment



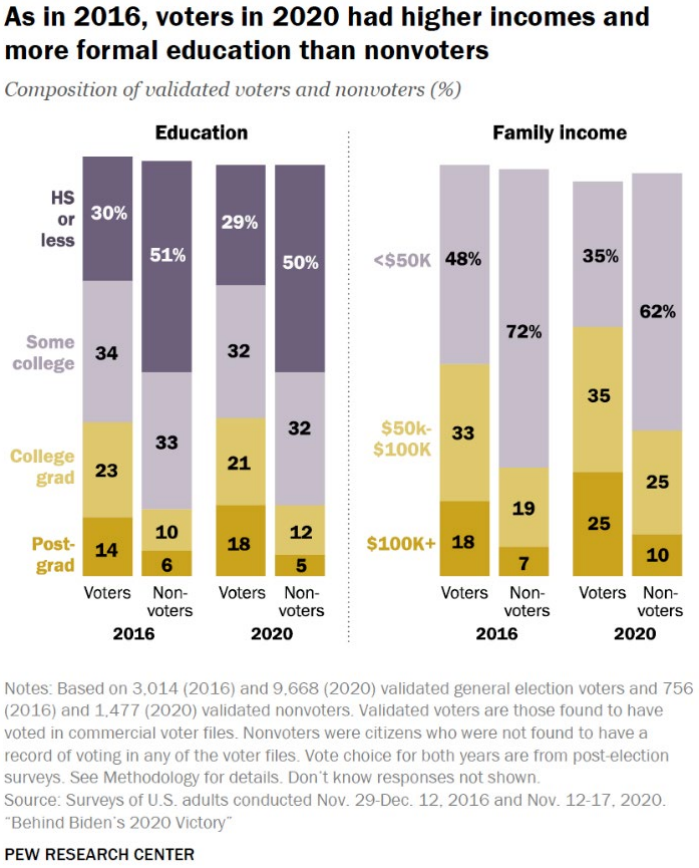
Source: Carnevale, A.P., Jayasundera, T., & Gulish, A. (2016). *America's Divided Recovery: College Haves and Have-Nots.* Washington, D.C.: Georgetown Center on Education and the Workforce. Retrieved September 16, 2022 from https://cew.georgetown.edu/cew-reports/americas-divided-recovery/#resources.

Society also benefits from a robust higher education ecosystem. Residents with more education pay more taxes that are the source of revenues needed to provide services that benefit the residents of the state in myriad ways. Well-educated communities are also less likely to draw on state-supported services; they have better health and require fewer medical services, they are less likely to find their way into the penal system, and they require less support of social service agencies. For example, according to the U.S. Department of Justice, in 1997, about 41 percent of inmates in state and federal prisons and local jails had not completed high school, where only 18 percent of the total adult population had not completed high school.[1] A 2012 study showed that life expectancy varied markedly by education and race, and that the differences between those

[1] Harlow, Caroline Wolf. "Education and Correctional Populations." *Bureau of Justice Statistics Special Report*, January 2003, 12.

with a college education and those without were growing wider over time.[2] In the 2020 presidential election, college graduates were much more likely to vote compared to non-graduates (Figure 3).[3] Taking steps to ensure that residents are highly educated is a cost avoidance strategy for states.

Figure 3. Voting Behavior Associated With Educational Attainment and Income



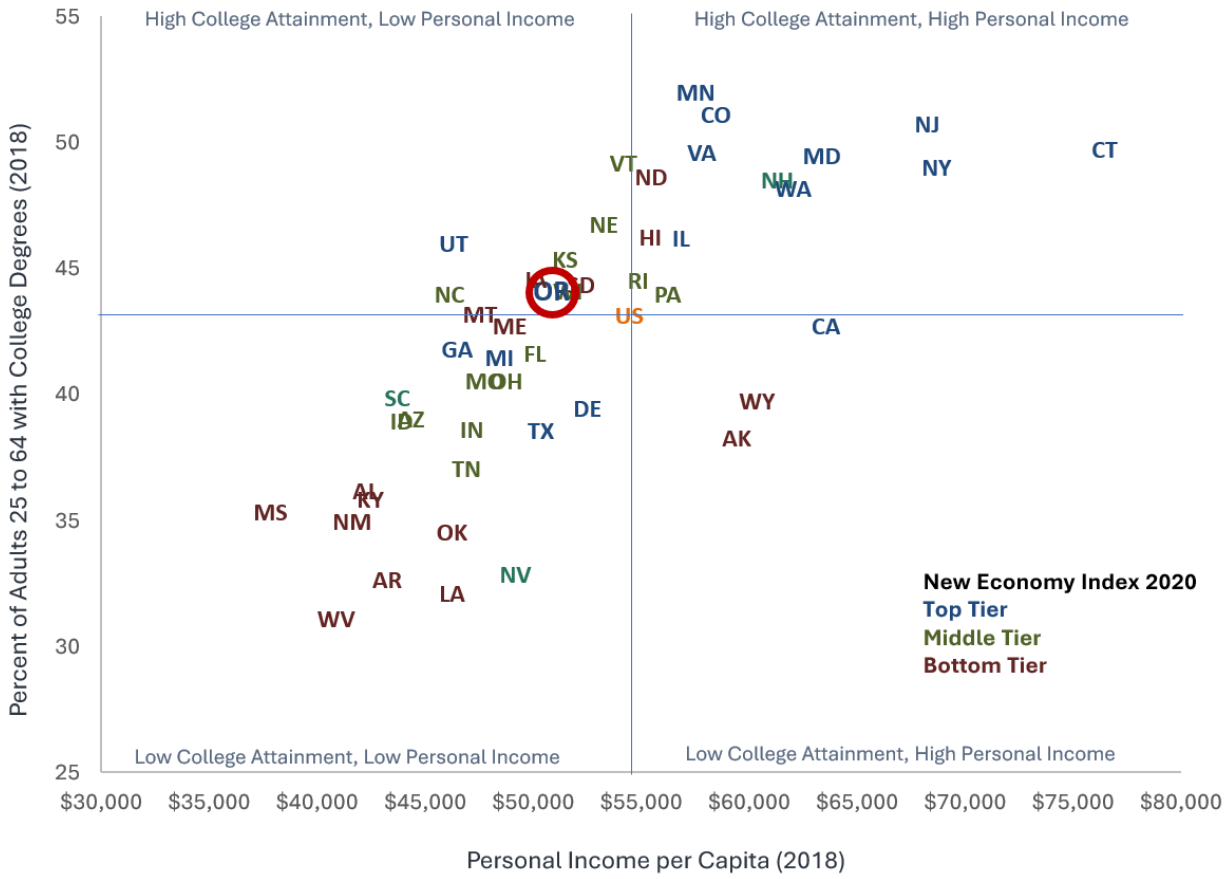
Too often lost is a recognition that there is a strong relationship between education attainment, personal income, and the nature of a state's economy. Evidence shows that those states that rank highest on the New Economy Index—they have an economy based on information and biological technologies—are the states with the highest levels of education attainment among the working age population and, consequently, the highest levels of per capita income. Relative to other states, Oregon has low personal income despite high educational attainment rates and an

[2] Olshansky, S. Jay, Toni Antonucci, Lisa Berkman, Robert H. Binstock, Axel Boersch-Supan, John T. Cacioppo, Bruce A. Carnes, et al. "Differences In Life Expectancy Due To Race And Educational Differences Are Widening, And Many May Not Catch Up." *Health Affairs* 31, no. 8 (August 2012): 1803–13. https://doi.org/10.1377/hlthaff.2011.0746.

[3] "As in 2016, Voters in 2020 Had Higher Incomes and More Formal Education than Nonvoters." *Pew Research Center - U.S. Politics & Policy* (blog), June 30, 2021. https://www.pewresearch.org/politics/2021/06/30/behind-bidens-2020-victory/.

economy rated among the top tier in recent years (Figure 4). Rising into the ranks of states with a high technology-based economy is the objective of numerous states. The states' colleges and universities are the tools to be employed in reaching that goal.

Figure 4. The Relationship Between Educational Attainment, Personal Income, and Economic Conditions



Source: U.S. Census Bureau, American Community Survey; Bureau of Economic Analysis, ITIF

As stated previously, Oregon has proved that it can establish priorities and develop plans to pursue those priorities; it has done so in the areas of transportation and environmental protection. But addressing these and other priorities costs money. Oregon is heavily dependent on income taxes to fund those activities and programs it cares most about. Increasing tax revenues by increasing the tax base rather than tax rates is dependent on having more tax-paying residents in high-wage jobs. The ability of the state to invest in those quality-of-life priorities is dependent on its investment in its colleges and universities. Reducing the investment in higher education may free up resources for other priorities in the short run, but this strategy will fuel a race to the bottom; it will not put the state on the long-term path to prosperity.

The institutions that can play the central role in creating the new Oregon are facing numerous challenges. Among the most important of these are those presented by the interrelated issues of demography and institutional finance. Oregon's colleges and universities (especially the universities) are heavily dependent on tuition revenues to fund general operations. This makes

institutional finance extremely sensitive to enrollment changes. There are strong incentives to enroll as many students as possible, which can layer additional stress on other public institutions which may lose those students to their better-positioned peers The demographic projections show a leveling off of high school graduates; it will become increasing difficult for institutions to grow their revenue streams by enrolling more students from their traditional student populations, at least without engaging in some very different practices. Oregon has among the lowest high school graduation rates of any state in the union. The number of high school graduates can be increased by increasing this low graduation rate: even moving the rate to the national average would increase the pool of potential college enrollees. Since each of the universities has teacher education programs—and ties to the public school system—it is in the institutions' self-interest to assume more responsibility for the success of these schools.

The students who do graduate from high school in Oregon also have a lower rate of college participation than is true in other states; Oregon graduates are more prone to heading to the workplace rather than to college. Enticing more of the recent high school graduates to enroll in college is another strategy by which the pool of potential enrollees can be expanded. But this will require adapting education programs to meet the expectations of this untapped pool of potential students. Since they are opting for work over college, the approach will have to be one that builds on their proclivities to emphasize economic benefits. This means that academic programs designed to attract these students will have to provide them with the skills and knowledge that gives them a step up the economic ladder in a relatively short period of time—a program structure that is the inverse of common practice in which students are expected to take broad, general courses before taking more occupation-related courses. Since these students are also likely to be working while going to college, flexibility in scheduling that allows them to simultaneously pursue both working and academic lives is a prerequisite to their willingness to enroll in college, and to be successful once there. This same set of requirements pertains to attracting individuals who have been in the workforce for several years and are seeking the benefits associated with getting some level of postsecondary education.

These approaches to expanding the pool of potential students are worthy and necessary, but they will not yield immediate results. In the meantime, all institutions have an incentive to compete strongly for a stagnant pool of traditional-age students. In this competition, those institutions with less prestige and fewer programs that can be offered to potential students are at a disadvantage. These disadvantaged institutions must be sustained in order to serve a group of students who are unlikely to be served successfully by those institutions that cater to a more academically prepared group of students. The question is "What's the mechanism by which these institutions can have a sustainable business model in the face of increasing competition for their traditional students?"

This demographically induced constraint on enrollment growth is running headlong into the expenditure realities facing Oregon colleges and universities. By policy choice, Oregon is a labor-friendly state. As a consequence, the level of benefits paid by the state's academic institutions is higher than is the case in most other states. And through agreements reached at the state level, the costs of benefits increase each year. This set of circumstances has two major implications for the postsecondary institutions. First, the revenues that are devoted to compensation buy fewer faculty and staff assets than is the case elsewhere in the country. The only way that colleges can

devote more resources to compensation is to employ fewer personnel. In the end, this limits the capacity of institutions to provide the range of support services necessary to help students succeed to invest in new programs and services to students, employers, and communities. Second, the ability to raise tuition rates sufficiently to cover increasing personnel costs is constrained by public sentiment that says that tuitions are already too high (and in Oregon they are high in comparison to other states), policymakers who act to limit annual rate increases, and the reality that raising tuition could push the price of higher education beyond the means of more and more students and lead them to delay or decline to attend college. Yet the evidence is that, once students take a break from academic pursuits, the chances of getting them back into the pipeline decrease. The longer the break, the less likely that the stop-outs will return.

This combination of factors—constrained ability of institutions to increase tuition revenue, either through enrolling more students or substantially raising rates, and the inexorable increase in the costs of operations—put the institutions in a very difficult position. There are multiple ways in which the institution's funding models can be stabilized in ways that provide them a viable future. No single action will suffice; it will take a combination of steps to accomplish the desired objective. Chief among these steps is additional state funding that is more intentional in the ways in which it is expected to address state priorities. State funding should be directed to:

- Rebalancing the shares borne by the state versus the student. A practical way to accomplish this would be to provide additional funding to the institutions in exchange for an institutional commitment to constrain tuition increases (essentially substituting state funding for student funding). This would not provide additional resources to institutions in the short run, but by stabilizing cost of attendance over time it would make college attendance more affordable and be a tool in convincing more students to attend college—a mechanism to improve the state's low college participation rate. The power of this action could be enhanced by increasing state funding in exchange for a reduction in tuition (buying down the student contribution).
- Investing in the development of new capacity, primarily faculty and equipment necessary to mount new programs and to increase research competitiveness in key areas. Such investments need to be made in the context of clear priorities derived from a statewide economic development plan.
- Making sure that college is affordable for adult, primarily part-time students. The current student financial aid programs work reasonably well for full-time students who are recent high school graduates. But they do not work well for the majority of community college students who are neither full-time nor recent high school graduates. Student assistance based on a state-level work-study program is likely the best device to address this particular affordability issue.
- Rewarding institutions for their role in enhancing the state's labor pool by educating out-of-state students who remain in Oregon after graduation are employed in the state. It is understandable that the state would be reluctant to pay for the education of residents hailing from other states, but recognizing the contributions of state institutions to meeting the workforce needs of employers would be sound public policy.

Arguments for increased state investments in higher education will come across as self-serving unless framed in the context of their contributions to achievement of high priority state goals. At the moment, there is no widely shared vision for the future of Oregon, nor a statewide economic development plan, that provides that context. It behooves higher education leaders to encourage policymakers to take the leadership in creating a body charged with developing such a vision and plan. If efforts to persuade policymakers to take this step are unsuccessful, education leaders will have little choice but to assume this responsibility and, working together, articulate a future oriented plan for Oregon and attempt to sell it to not only policymakers but the general public as well.

Institutions cannot rely solely on the state for the provision of additional resources. Other sources must be tapped as well. While demographics make it harder to enroll additional students, this is still a possible source of additional revenues. Doing so will take action on a variety of fronts:

- Improving retention and graduation rates. Oregon institutions, particularly community colleges have plenty of room to improve in this regard. It's an old saw, but nevertheless a true one, that the individuals who are most reachable in any effort to increase enrollments are students who are already enrolled but need assistance of one kind or another to continue their enrollment.
- Taking steps to encourage enrollment of students who choose work over college when they leave high school. This will require not only recruitment strategies that make the economic case to these students, but changes in academic offerings so that these potential students can find programs that cater to their desire to get into well-paying jobs quickly. It will also require that the prospective students not perceive college enrollment or work as an either/or choice, but rather they should recognize realistic options that permit them to work and study in varying degrees simultaneously. This work will fall primarily to the community colleges; they will need support in developing the capacity to meet these demands.
- Working with the public schools to improve their graduation rates.

Employers represent another potential source of revenues for institutions. Experience in other states indicates that tapping employers for gifts is a hard sell. It is an easier sell when they see an immediate benefit. A state-funded work study program that matches employer contributions to paid internships or other work experiences with state money is one way to get some employer skin in the game. Such a program would help institutions through tuition revenues from students who would otherwise not enroll.

Finally, the colleges and universities themselves have to take some responsibility for ensuring their own financial futures. Their skin in the game will necessarily come from increasing the efficiency with which they provide educational services. They can attempt to cut costs within the constraints of current business models, but too often this results in accelerating a downward spiral rather than leading to fiscal stability. Efforts to cut costs inevitably lead to reductions in programs and staffing of student support services, steps that make the institution less attractive to potential students and less able to ensure that those students who do enroll are successful.

A much more fruitful path to creating efficiencies is through institutional collaborations in both administrative and academic functions. There are numerous examples around the country of institutions coming together to jointly operate a variety of back-office functions—purchasing and contracting, construction management, IT, and human resources, accounting, and the maintenance of student records. Considerable savings from such collaborative efforts have been well documented. Less common, but potentially more beneficial (in part because they offer not just greater efficiency but also the extension of the reach of academic programs to populations that might otherwise struggle to access them), are multi-institutional approaches to the delivery of academic programs. Such collaborative efforts take a variety of forms:

- Taking steps to improve student transfers among institutions. This effort is on-going in Oregon, but the effort needs to be imbued with a much greater sense of urgency.
- Joint offerings in which faculty from two or more institutions work together to deliver an academic program.
- Collaborations in which one institution delivers a program in which it has special expertise to students at other institutions, an arrangement in which the receiving institution(s) provide the administrative and student support services and the sending institution is responsible for delivery of the academic content.

These latter forms of collaboration benefit greatly from the presence of an entity staffed by individuals who have demonstrated strengths in program management. They can be accomplished without this kind of infrastructure, but the results seldom get institutionalized in these arrangements, unraveling when the key actors change jobs or lose interest.

Summary of Findings and Observations

What follows is a high-level discussion of the principle findings that emerged from an extensive data analysis and from multiple tours through Oregon to meet with institutional leaders, students, community members, and other key informants and stakeholders. Details concerning the approach to generating these findings and observations can be found in the appendices.

a. Summary of data analyses. The extensive data analysis undertaken during the course of the project led to a set of key findings that inform the recommendations made later in this report. The data supporting these key findings are also presented in the next major section of this report.
    - The proportion of the adult (25-64-year-olds) population with a postsecondary credential of value is at the average of the nation as a whole. The proportion of younger adults (25–34-year-olds) with a postsecondary degree is well below the national average and the attainment levels of many competitor countries. Those individuals entering the workforce are less well educated than their peers in competitor states and countries.
    - Education attainment rates—and per capita incomes—vary greatly from one county to the next within the state.

- The Oregon economy is more dependent on manufacturing, government, and farming and forest products than the nation as a whole, although the manufacturing sector has shrunk significantly over the past decade. Oregon lags the nation in business and professional services (although this sector has grown substantially in recent years), information, and finance. These latter sectors are indicative of a high-tech economy.
- The types of jobs available in different regions of the state vary markedly.
- Oregon has an aging population. The projected number of individuals in the prime working age cohort is stable at best. The older population is projected to grow significantly. This finding has serious implications for the supply of the necessary workforce, as well as for sustaining the level and kinds of services required by the evolving needs of the state's population.
- Oregon is projected to have a slight decrease in the number of high school graduates over the next 15 years. California, the primary state from which non-resident students are attracted, is projected to have a much larger decrease in the number of high school graduates. Growth in numbers of high school graduates in Washington and Utah will not compensate for anticipated losses in California.
- Oregon has among the lowest rates of high school graduation (ninth graders who graduate within four years) of any state in the union.
- The rate at which those students who do graduate attend a postsecondary institution directly after high school is also among the lowest in the country.
- Enrollments in the state's community colleges have been declining consistently over the past decade with the greatest decreases being among white students. The declines in community college enrollments are among the steepest of any state in the country. University enrollments, collectively, have remained generally flat overall, though the regional universities, PSU, and UO have experienced declines.
- The participation rate of adults (ages 25-49) in Oregon is close to the national average.
- Community colleges enroll a high proportion of part-time students. Universities enroll far fewer. Community colleges also enroll a large number of students in non-credit programs although there are wide variations in non-credit enrollments from college to college. These two facts taken together indicate that many community college enrollees are part-time students who enroll in noncredit (likely workforce oriented[4]) programs.
- Not only are graduation rates low in Oregon institutions,[5] but Oregon produces few graduates in the key fields of technology workers and health care professionals relative to the employment base of such occupations in the state.

[4] Enrollments in community-oriented programming also accounts for a portion of noncredit enrollment, but these activities are not the focus of this report.

[5] Graduation rates here do not include students who successfully transfer from two- to four-year institutions without a degree.

- On a per-capita basis, Oregon universities conduct substantially less research than states that are economic competitors. Oregon is in the top third in expenditures per capita on research in psychology and the life sciences but near the bottom of the list with regard to expenditures in the fields of computer science and engineering.
- Public institutions in Oregon have higher expenditures per FTE in spending categories related to their missions (which excludes auxiliaries and other self-sustaining programs). One explanation for this may be found in the data that show that the ratio of benefits to salaries is higher in Oregon than in all but a handful of other states (partly due to PERS). They also consistently report that they have insufficient resources (especially faculty and staff) to fulfill their missions.
- These spending patterns require more revenue. On average, Oregon's colleges and universities have more revenues per FTE student from the combination of public sources and tuition than the national average. Universities get much more of their revenues from tuitions but substantially less from state appropriations that the national average. Community colleges get more revenue from both tuition and public sources (state plus local tax revenues) than the national average.[6]

b. A synthesis of primary takeaways from stakeholder meetings (in no particular order).
   - For community colleges, most new programs are grant-funded. There is a need for an investment fund to cover the start-up costs for new programs.
   - Current student financial aid programs do not work well for part-time students, particularly students who are seeking career certifications through non-credit programs. Paid internships would be the most helpful form of student aid for many part-time students.
   - Housing costs are a primary barrier for students' ability to pay for college. These costs are also a problem in hiring employees.
   - Lack of childcare is the other major factor serving as a barrier to college enrollment.
   - CTE programs in the high schools are becoming a major competitor for community college programs. Oregon needs much better articulation arrangements.
   - The fact that Oregon institutions operate on a quarter system increases costs and makes articulation with out-of-state institutions more difficult.
   - There is a real disconnect between higher education programs and licensing boards. HECC could provide a real service by working with licensing boards to develop better linkages.
   - A common thread from advocacy groups was the need for minority students to have more teachers and mentors who "look like them."
   - For rural students access to high-speed internet remains a major problem.

[6] The data source for this statement is SHEEO's State Higher Education Finance report. SHEEO backs out all appropriations and FTE associated with non-credit enrollment; Oregon's own reporting includes the non-credit FTE in the denominator.

- The Major Transfer Maps process is not working. It would be better to put more emphasis on developing common course numbering.
- The funding model for community colleges needs to reward
  - Transfers.
  - Completion of certifications as well as certificates and degrees.
  - Completions by at-risk populations.
  - Progress made by students in adult basic education and English as a second language programming.
- Community colleges would benefit greatly from having a good supply of data about:
  - Employer needs in their region
  - Minority-owned businesses and minority employees—where they are working and the occupations in which they're employed.
- There has not been nearly enough attention to credit for prior learning—veterans made particular note of the inability to get academic credit for skills learned in the military.
- The lack of a statewide policy for dual enrollment has contributed to unproductive competition between public providers and serves as a barrier to student mobility and affordability.
- Behavioral health is an issue in all parts of the state—there are not enough programs tailored to needs and not enough providers to meet student and community requirements.
- The state needs access in all regions of the state to GEAR UP programs and the kinds of services they provide (Note: Tennessee is a place to look for a good example).
- Oregon needs a lot more capacity to collaborate on both administrative services and academic programs.
- Inclusion is a worthy objective, but institutions are getting initiative fatigue. Too many initiatives without integration. Many argue for conflict resolution as a place to start.
- Poverty is a root cause of many of the issues, which greatly affects the ability to address the equity agenda.
- Students need "navigators" from their first contact with an institution through program completion.

Criteria for Recommendations

Prior to formulating recommendations, it is helpful to identify some key principles or criteria to serve as guidance. The following reflects the most essential of those criteria.

1. **Students and state needs come first.** Oregon's public higher education institutions are essential instruments to address the needs of students and the state. In doing so, they

are the means to an end, not the ends themselves. Oregon's public policies addressing postsecondary institutions should put the highest priority on identifying and serving those needs, and the state's institutions should reflect that priority in their decision-making and their management. In identifying state priorities, Oregon should explicitly include economic development as a focus and consider the varied contributions that colleges and universities make in that regard, from providing the talent to meet workforce needs to generating new knowledge and applications to drive growth, prosperity, and healthy communities. For the community colleges, they additionally must prioritize local needs.

2. **Regional variation.** Oregon's colleges and universities, and the state policies that support them, must account for regional differences in workforce requirements, student populations, and other conditions. This is especially germane for community colleges whose governance structures and funding sources tend to assure that local requirements are given priority. But Oregon's universities also must attend to regional needs, even when they have a statewide, national, or international mission and reach.
3. **Collective action.** In the absence of a formalized system structure, Oregon needs mechanisms that help to ensure that habits form around achieving collective responses to systemic problems.
4. **Local control of the community colleges.** Community colleges in Oregon are locally controlled and benefit from substantial local funding support, which requires decisions on issues like program approval to be handled quite differently from those that are made with regard to the universities.

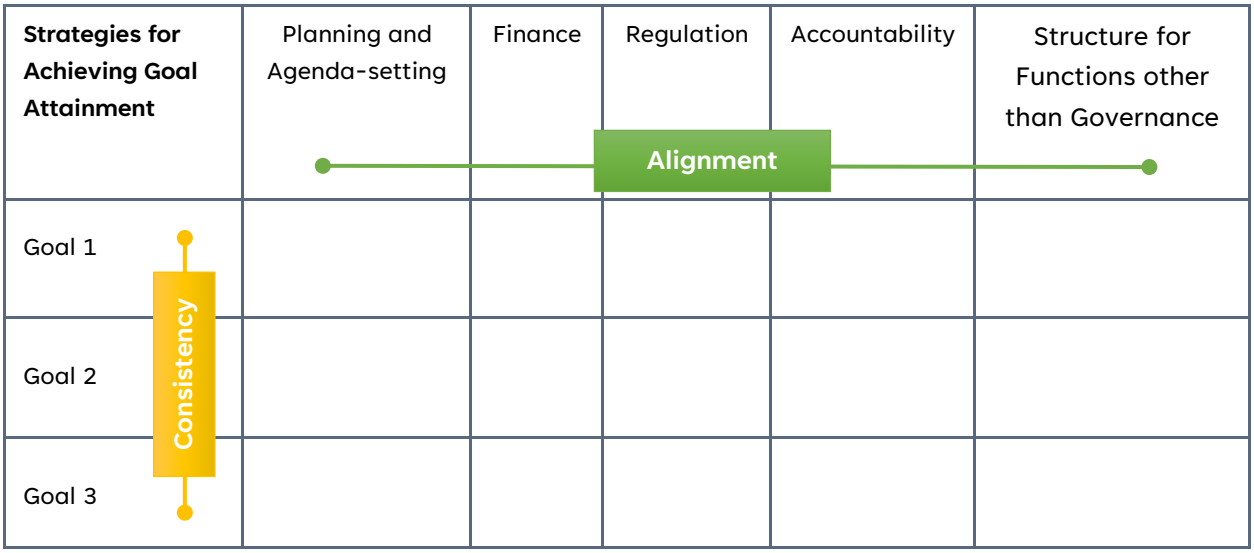
Recommendations

These criteria combined with the findings and observations presented in this report provide the basis for a set of recommendations developed to best meet the needs of Oregon and its residents. Collectively, they seek to more fully recognize and capitalize on the value of the state's public colleges and universities as critical assets in driving economic and social mobility, achieving equity, spurring economic development pushing the frontiers of human understanding, and meeting the needs of employers, students, and regions and communities. A major theme that runs through all these recommendations—in addition to appearing as a separate stand-alone recommendation—is the need for Oregon and its institutions to emphasize policies and practices that reduce gaps in access, participation, and success in higher education, the workforce and the economy, and in society more broadly. Not only should these efforts elevate equitable outcomes, but the deliberative process of reaching decisions about what to do and how to do it should always purposefully incorporate considerations of equity and impact on different populations.

These are a set of recommendations designed for the presidents of Oregon's colleges and universities either to implement themselves or to implement in concert with partners in the state. These recommendations are framed in keeping with a conceptual framework that NCHEMS has found useful. The framework is based on the understanding that continuous improvement can be achieved when there is a clear set of goals that have widespread acceptance and when the

available policy tools are utilized in ways that are aligned with those goals—they are applied in ways that reinforce each other. The tools available are summarized in Figure 5.

Figure 5. Strategies for Achieving Goal Attainment



In summary these tools include:

c. The establishment of clear and widely accepted goals that provide guidance for policy actions for decisionmakers at both state and institutional levels. The goals should reflect regional as well as state priorities. It is important to note that the goals should be first and foremost goals for the state—higher education goals are most effective when developed in the context of state goals.
d. Agenda-setting—the identification of key issues that need to be addressed by state policymakers and the collective higher education leadership of the state.
e. Funding—the allocation of state funds in ways that support the agreed upon goals in the most efficient and effective ways possible. Funding should extend beyond support for current operations but also include strategic investments in new capacity.
f. Regulation—as applied to higher education, rules that provide guidance for institutional functioning, especially in terms of what programs they can offer, academic policies addressing student mobility, etc. Because regulations often impose burdens and insert the state into policy judgments institutions (and their faculty) claim as properly their own, they should be a tool of last resort. But they are a powerful tool that can be employed if necessary.
g. Accountability mechanisms—regularly monitoring progress on the achievement of stated goals and institutional contributions to those achievements.
h. Structures—organizational mechanisms put in place to perform particular functions within the current governance model.

Informed by findings from our quantitative analysis, by input from stakeholders gathered during our visits and regular conversations with the Advisory Panel, and by the framework described above, this report concludes with the following recommendations.

1. **Promote the creation of a process for articulating a vision for the future of Oregon.** Throughout the project, it was noted that decision-making in higher education is hampered by the absence of a clear vision for the future of the state—a vision that would provide guidance and a broader context and direction for what investments the state makes in general and why it invests in higher education institutions in particular. There seems to be a clear sense that it does the latter in an effort to ensure individual opportunity is as widespread as possible—particularly through its rhetoric around making improvements in equity. But the lack of vision was particularly evident regarding any form of planning for economic development in the state. Most notably absent was in how state policymakers and other influential leaders expect higher education to contribute to spurring economic development by reinforcing Oregon's existing employers and industries or by incubating and nourishing new ones. Oregon's task force on semiconductors was one prominent exception, but even that industry-specific initiative has not been woven into a more comprehensive plan for leveraging higher education to support economic development activities through intentional policies including funding.

   In contrast, states that have managed to develop and maintain a level of momentum regarding the evolution of the higher education enterprise in the state have developed such a future-oriented focus. The development of such a vision is best led by the governor (e.g., Tennessee and Kentucky), but it has been led by well-respected legislative leaders in some states (e.g., North Dakota). In the absence of impetus from either of these government branches, institutional leaders, working together and in collaboration with HECC, should mount an effort to gain legislative approval for a Blue Ribbon Commission charged with creating such a vision with the general composition specified and the method of naming members indicated. More important than the formal positions of members is their stature in the state. Developing the statewide vision is a task beyond the purview of the HECC, notwithstanding its assignment to conduct statewide planning, because the vision cannot be created from within higher education, and it cannot be perceived as being a vision *for* higher education. Rather, this task requires leadership, engagement, and buy-in from major industry, political, and opinion leaders within the state, and its references to higher education need to be about how it will be useful in supporting that vision. This imperative calls for the composition of the group's members to have fewer, rather than more, direct links to existing higher education institutions. Although the group should prioritize input from the state's colleges and universities, its members should come from the legislature, the ranks of influential state CEOs, major statewide media, important foundations with a keen interest in Oregon, etc. Attention to obtaining the voice and perspective of critical informants generally and marginalized communities in particular should be a priority of the Commission's approach to generating its findings and recommendations. While HECC cannot control the creation or functioning

of such a Commission, it should serve as the primary staff to the Commission and actively coordinate the collection of that input.

2. **HECC should continue the development of the statewide strategic roadmap for postsecondary education to be more inclusive and to particularly address statewide and regional economic development needs.** Oregon's current strategic roadmap is ripe for a more comprehensive focus on the ways higher education is linked to economic growth. The state's current focus on educational attainment remains the most ambitious of any state; for many years the goals it articulated spurred substantial change in postsecondary education and helped drive improved outcomes and attainment for state residents. But even with a renewed push to close attainment gaps based on race/ethnicity, the public agenda reflected by Oregon's educational attainment goal appears to have lost considerable traction. Oregon has an opportunity to rekindle momentum and steer state efforts and investments with renewed coherence by expanding on its strategic roadmap and adopting strategic priorities that addresses the broader range of the state's current needs and its vision for the future, as articulated in the prior recommendation. HECC should undertake an effort to renew its strategic planning activities with these broader goals at the forefront, ideally with the full backing of a report from the commission called for in the previous recommendation.

   Such a plan would go beyond measures of educational attainment to double down on making progress on achieving equity and on meeting workforce needs. These are more closely related than is commonly acknowledged—the equity component of a new plan should not neglect access to high-paying occupations and the programs that lead to them. Moreover, as a result of demographic change and the need for social justice for growing populations that has never been greater, the revisions must adopt a strong statement and aggressive goals for resolving long-standing equity concerns. The plan should also recognize the ways in which the nature of equity gaps differs from one region of the state to another. Such a plan should be developed in close collaboration between HECC and the institutions and it should much more closely tie the priorities for higher education to the future of the state.

   To do that, it should include a higher education response to a thoughtful economic development strategy at the state level, a strategy that is currently absent. This is not to say that there are no such plans floating around the state, but rather that there is no plan at the state level that comprehensively addresses the increasingly tight linkage between education beyond high school and societal prosperity. This plan must acknowledge the variation across regions of the states, and it should place a major emphasis on aligning the educational programming available with both existing and aspirational workforce development needs of each region and the state as a whole. But the plan should go beyond responding to workforce development needs and include a focus on workplace development as well. As a result, it also should specify how state investments in research and technology transfer matter, how the state can draw upon its postsecondary education investments to attract and retain employers, and how venture funding supporting applied

research can drive homegrown enterprise. A major element of this component of planning should include outreach to employers, whose voice in policymaking in the state is diffuse. A coherent message from employers of all sizes has helped drive productive reforms in other states. Working together and with leaders of businesses and representative organizations, HECC and institutions should work to cultivate that coherent voice to advocate for how the state can and should benefit from investing (more) in higher education. HECC and the institutions should work together to develop a strategy for creating a strong partnership with the state's employers.

3. **Reinforce the urgency and criticality of achieving equity.** Judging from the public expression of the need to close participation and attainment gaps among different populations, equity is a clear priority for postsecondary education in Oregon. It would be a clearer, more operational priority—with a better likelihood of changing behavior—if targets were explicitly stated, progress against them was measured, and these data were used to impact policy and practice. Equity is a cross-cutting issue that can and should be addressed using all of the policy tools previously described. The role of HECC in this arena is to continue to maintain equity as a state priority, to make equity a factor in performance funding, and to emphasize progress in achieving equity goals as an element of the annual accountability report. The Coordinating Commission can also serve as the convener of conversations focused on sharing good practices.

4. **Oregon's public postsecondary education sector should adopt coordinated, collective, systemic behaviors, which can be achieved without resorting to governance changes.** This is possible by creatively aligning strategies and incentives as described in Figure 5.
   a. **Role and mission.** In 2019, NCHEMS and SmithGroup developed a capital strategic plan for HECC's use in addressing the capital needs of the public universities (the community colleges' capital needs were not in the scope of the project). One of the recommendations put forward in that report was to urge Oregon to better define and differentiate institutional roles and missions, partly as a critical element to determining the need for space in various types and configurations but also as a device for providing guidelines for the types of institutional change that can be pursued without extensive approval processes. While the pandemic surely upset any effort to address this recommendation, it is no less urgent now than it was three years ago, and the utility of bringing greater clarity to institutional roles extends beyond capital planning to touch on policy priorities and strategy at every level and across the framework illustrated in Figure 5.

      This kind of designation of role and mission may exist within the authority of HECC, at least in terms of "approving mission statements." What is needed, however, is a clear set of differentiated "operational missions," which serve a different purpose. Whereas mission statements are often deliberately brief, as well as lofty and inspirational, operational missions describe the program array and expectations for research and public service activities, audiences to be served (students' geographic origin and prior academic experience, in particular), and other special elements of mission, such as

Land-grant status. This may include a clear expression of the academic preparation levels students should be expected to have in order to be admitted to different institutions. Alternatively, the state could adopt a set of statewide admissions requirements as a separate policy. Having clear standards would help to reduce unproductive competition among public institutions in the state while improving communication with the K-12 sector about what is necessary for success in college.

Arkansas has defined operational missions in this way for its public institutions.[7] Using this approach does not eliminate the tensions among public institutions, but it has sharply reduced them while equipping policymakers with clear guidelines about institutional missions that help in preserving intentional decision-making on broad public policy matters. Getting to the point where institutions in Arkansas reached a general agreement about their respective operational missions required the state to mandate the development and use of such designations. Creating the designations required the engagement of an external entity to assist the state's coordinating board in a data-based and deeply consultative approach.

The stickiest issue in this arrangement is almost always centered on articulating the "audiences to be served" component of the mission statement. This is particularly the case where some institutions are explicitly charged with serving the needs of students in a specific region of the state while other institutions have a state-wide charter and, therefore, feel it is within their mission to offer programs in all parts of the state. These are issues to be worked through by the institutions in collaboration with HECC. One approach is to adopt a strategy like that employed in Oklahoma where regional institutions are assigned "responsibility areas"—geographic areas in which they are assigned responsibility for assessing needs and finding ways to address those needs. In many cases, this involves inviting other institutions (most frequently those institutions with a statewide portfolio) to deliver programs in their back yard, with a proviso that revenues would be shared, to reflect the role of the regional institution in facilitating delivery of programs in their area.

The benefits of making clear distinctions are in sharpening the discourse between institutions and policymakers, a discourse that is often muddled in its absence. With differentiated roles, institutions have a clearer case to make to policymakers about strengthening the priorities that are within their portfolio, such as graduate education. Policymakers can better direct investments in capacity development, while also being better equipped to be productive problem solvers when institutional interests come into conflict. Provosts and HECC can more appropriately resolve questions about the

[7] Arkansas Code §6-61-207 authorized the Arkansas Higher Education Coordinating Board to establish role and scope designations for the state's public institutions. It does so under its "Role and Scope Designations" policy located at https://adhe.edu/File/18_-_ARKANSAS_INSTITUTIONS_OF_HIGHER_EDUCATION_ROLE_AND_SCOPE_DESIGNATIONS.pdf.

programmatic needs and how best to serve them to meet regional and statewide goals, as well as to weigh the benefits of collaborative opportunities.

It should be noted that establishing these roles should be intentionally linked to the achievement of the broad strategic vision for the state, and for how higher education resources should be deployed to achieve that vision, which Oregon needs and currently lacks. Further worth noting is that these considerations are important for the universities as well as the community colleges, but the specific and minimally overlapping geographic spaces they serve is often sufficient for differentiating them. Nevertheless, it is important not to neglect the particular competencies in specific areas of subject matter that community colleges may claim, nor the localized workforce requirements that they face (often tightly coupled). In addition, these role and mission considerations in the two-year sector should also consider how to best deliver certain, typically high-cost programs to areas that have sporadic need for them such that maintaining the program to train students for corresponding occupations, e.g., radiologic technicians, is inefficient or untenable.

This landscape review has created much of the data needed for developing operational missions, but it has been outside the scope of this project to specify them for each institution.

b. **A major HECC role should be facilitating solutions to problems that exist at the boundaries between institutions and sectors.** This is not intended to suggest that HECC's efforts in other areas should be curtailed. Rather, it is a recognition that HECC is uniquely positioned to address the gaps between institutions and between institutions and other parts of state government. Among the priority issues at these intersections identified during the stakeholder engagement activities were:
    - Articulation and transfer between community colleges and universities. This is already ongoing but needs clearer expectations and timelines. Considerable effort is going into the development of Major Transfer Maps (MTMs). By all reports, progress is painfully slow and the benefits to students of the work to date is uncertain. There is a consensus among institutional academic leaders that a more productive path would be to transfer the effort being invested in the development of MTMs to speeding the development of common course numbering, starting with the courses that transfer with the greatest frequency. Program transfer maps can subsequently be specified in terms of commonly numbered courses. The major focus with regard to creation of MTMs should be development of a common general education curriculum specified by reference to commonly numbered courses. The objective should be agreement on a curriculum that satisfies the general education requirements at all public institutions.
    - Alignment of CTE programs between high schools and community colleges. This work becomes more important as the amount of CTE education increases in the high schools.

- Alignment of academic programs with workforce needs in different regions of the state. Particularly important is working with the state's workforce boards to ensure that new programs offered by community colleges are added to the Eligible Training Provider List in a timely manner. It should be the expectation that community colleges are the preferred provider for training programs conducted under the auspices of local workforce boards. This will require executive level direction from the offices of the governor and the director of workforce development. It will also take considerable accommodation on the part of colleges in order to align their program offerings and schedules to the needs of individuals enrolled in WIOA supported programs. This alignment of programs and workforce needs will require data about regional workforce needs more nuanced than typically available. HECC can provide a real service, especially to community colleges, by developing the necessary data and making them available in a timely fashion. Implementation of actions necessary to meet this particular expectation will necessarily be incremental.
- Working with relevant state agencies to ensure that the processes that link programs and licensure requirements are as seamless as possible for students and institutions.
- Articulating the role institutions play in stimulating and supporting economic development and helping to coordinate the application of university expertise to statewide problems.

c. **Oregon should incentivize collaborative activity among institutions and between institutions and other state and local partners.** While there are a number of collaborations among institutions—or faculty within institutions—across Oregon's public postsecondary ecosystem, the state is missing a systematic way of stimulating and supporting such activity. Effective multi-institutional collaboration is rarely straightforward or easy given the many likely barriers—in incompatible culture, processes and procedures (both among those that exist and others that would need to be created to support collaboration), organizational structure, the preferences of key personnel, etc.—that can derail collaboration before it can become habitual. The financial incentives of collaborating are frequently not obvious to individual institutions, even when potentially greater savings or better services to the state or students may be apparent. Indeed, the need for better cooperation in back-office administrative activities and in the delivery of academic programs to all parts of the state has been one justification for those who have argued for the return of a system in Oregon, but structural solutions focused on functions, rather than another governance overhaul, can deliver systemic solutions without the need to reconstitute a system.

   Institutions, collaboratively, should develop one or more entities expressly designed to provide shared services and to coordinate and manage the joint delivery of courses and programs on their behalf. Such an entity could also be useful in assisting with developing and operating joint activities in applied research, translating research into

marketable products or public services, and collaborative efforts to recruit and retain industries.

As part of the dissolution of the Oregon University System, the State of Oregon required the institutions to participate in such an entity, which is known as the University Shared Services Enterprise (USSE). USSE was needed to ensure that all seven newly independent institutions were able to manage key functions that had been performed by the system office, such as treasury and financial services. Because Oregon has some familiarity with a quasi-independent entity tasked with coordinating shared services on behalf of multiple institutions, it may be an option to separate USSE from Oregon State and create it as an independent, non-profit entity that could serve as the home from which shared services could continue to be offered to the separate institutions, and which could be the recipient of funding directly from the state. It may furthermore be modified to provide similar services to the community colleges as well.

Irrespective of whether the entity is a redesigned version of USSE or an entirely new organization, clear and appropriately designed governance is a critical necessity. Experiences in states like Vermont suggest that these activities are best organized to directly report to the institutional presidents, rather than through a single institution's structures or through a statewide agency that otherwise serves to provide oversight to public higher education (such as HECC). Alternatively, institutions could create a wholly new organization to serve this purpose. The set of activities that the entity should perform may be quite different than what USSE has historically performed.

To leverage interest in collaborative activities among institutions, the General Assembly should appropriate funds to the newly constituted entity. Such funding should primarily be aimed at seeding collaborative activities for a sufficient time for the value to be assessed and demonstrated. These funds will enable the entity to take calculated risks that show promise for improving efficiency or the quality and distribution of administrative services or academic programs. Additionally, its efforts should be externally evaluated from time to time, with those evaluations organized, but not conducted, by HECC. The specified entity should also look beyond the boundaries of public higher education to find opportunities for generating efficiencies through collaboration. Possibilities include working with nonprofit hospitals, local school districts and ESDs, and other similarly situated organizations to purchase utilities, acquire physical and mental health services, share transportation services, etc.

The state should also provide seed money for the creation of a similar entity to serve the needs of the community colleges for the purpose of expanding its reach to include service to community colleges or provide funding to the same entity described above (but only if the colleges believe this is a better option than having a parallel entity). This could start as a pilot program to develop a shared ERP system across 2-4

member institutions, akin to the CHESS model in New Mexico.[8] Funds should come from the legislature, the institutions (in-kind contributions should be recognized as funding along with direct support), and private philanthropy. HECC should assist this effort particularly by supporting this initiative within the legislature. It should be a ground rule that participation in such consortia is strictly voluntary, but state funding should be sufficient to create incentives for participation.

The above recommendations speak to the obligations of the state to promote collaboration among the state's public institutions. The institutions have obligations as well. They should accept the reality that resources are limited and that the primary path to acquisition of resources needed to strengthen programs within their missions is to more actively engage with other institutions for provision of programs and services that are outside their core areas of expertise. Shared services rather than mission or program expansion should become a natural response to identified student or regional needs.

In sum, the kind of structural reform being recommended has the following characteristics: it should

- Be based on voluntary participation. There should be no requirement that that all institutions (or all institutions in a sector) participate.
- Extend to academic program delivery as well as collaboration in the performance of administrative functions. Generally, it has been the case elsewhere that the case for shared administrative services is comparably easy to make and to develop solutions. But the need to collaborate in delivering academic programs has potentially greater benefits in savings and especially in ensuring that students and employers throughout the state have access to the programs they require for workforce development or for the achievement of personal goals.
- Be partially supported with state funds, both to seed such activity and to ensure its sustainability. State support is important
    - To send the message that collaboration is a state priority.
    - To create incentives for institutions to participate in collaborative efforts. It is likely that the greatest benefit for many of these activities is likely to be the TRUs and the smaller community colleges, and the level of investment will need to be sufficient to support the activity even without the largest institutions who may elect to maintain their own capacity. Or the investment should incorporate funding specifically to encourage participation by the larger institutions as well, so that the others may also benefit from the more advanced specialization in key areas that the large institutions are able to support.
- Recognize that more than one structure can be put in place to support collaboration on any particular function. For example, the state may elect to stand

[8] See https://www.chess.edu/.

up one structure to manage shared administrative services and a separate one to coordinate shared academic delivery.

The point is that structural solutions can be powerful tools to address issues facing higher education in Oregon, particularly those related to scale. Aversion to formal governance structures should not stand in the way of thoughtful structural solutions to problems in particular functional areas. But success in utilizing these alternative approaches will require that methods of allocating resources create incentives for the institutions to participate—they have to see participation as being in their self-interest.

d. **HECC should revise its approach to program review and approval.** More specifically, it should:
    a. Speed the process for adding new community college programs to the list of approved programs and to the Eligible Training Provider List, with one exception. Approval of bachelor's degrees at community colleges should be vetted through the same program review process to which the universities are subject.
    b. Review any new program proposals for conformity to the approved operational mission that is called for in the prior recommendation. If the program falls within the institution's mission, it would generally be automatically approved (although there may be exceptions). If not, it should be treated as an expansion/change of mission and is reviewed as such.
    c. Be proactive in identifying programs that are needed in a particular region and work with the appropriate institution to put the program in place or work out a shared services arrangement whereby the program can be offered without creation of a new program.

5. **Steps should be taken to purposely align state funding of both institutions and students with the goals expressed in the state's revised strategic plan.**
    a. New state investments in public postsecondary education in Oregon are needed; in addition to being aligned with state goals and complement other funding streams, any such investment should appropriately account for differences in institutional mission, incentivize collaborative activity, yield improvements in equitable access and success, and reduce the funding burden now being borne by resident students. Probably the best example of targeted investment on a large scale can be found in Kentucky where HB1, passed in 1997, provided for major infusions of state resources to enhance the capacities of the University of Kentucky as a research university, the University of Louisville to serve as a preeminent metropolitan university, the comprehensive four-year universities to better play their regional service missions and the new community college system to provide comprehensive services in all parts of the state. On a less grandiose, but still substantial, scale are the investments being made in Virginia institutions to increase the production of computer science graduates and the investments made in Florida to accelerate the growth of the capacity and impact of their research universities. Key to the investments in Kentucky and Florida is the

targeting of funding to institutions on the basis of clear differentiation in the roles that institutions should each play in reaching for a statewide vision and strategy for economic development and civic improvement.

b. Funding models for all institutions should reflect the characteristics of the students served as well as the nature (and different costs) of the academic programs offered. The allocation models should serve to recognize the roles of different types of institutions in the educational ecosystem and avoid creating incentives that have the unintended consequence of homogenizing institutions rather than reinforcing their uniqueness. The research universities likely offer a more expensive array of programs, but the regional universities and community colleges serve students who need a more expensive array of support services tailored to the populations of low-income, underrepresented, rural, adult, first-generation students they disportionately serve, if those students are to be successful.

c. Decisions made during the development of the funding model for universities regarding exclusion of all out-of-state students from consideration should be revisited. Most specifically, degrees earned by out-of-state students should be included in the calculations of the outcome measure *when those students are employed in Oregon after graduation*. Such an approach explicitly recognizes the contributions these institutions are making to economic and workforce development.

d. A calculation should be made at least biennially to determine the adequacy of funding for each public institution including funding from state, local, and tuition sources. Such calculations should appropriately account for differences in institutional mission and the characteristics of students being served. The funding model utilized by HECC should assure that adequate support is maintained for those institutions for which this calculation yields a finding of inadequate funding.

e. The planned review of the community college funding model should use a rational framework that addresses the frugal needs of maintaining each institution's value as an asset to the region and the state, variation in the costs of instruction based on scale (size) and scope (program array), performance incentives sufficient to drive sustainable and continuous improvement, and new investments tailored to community and regional needs. Such a framework might follow the one being adapted in Virginia, and it could be equally useful in revising the funding model for Oregon's four-year institutions as well, when it comes up for its next periodic review and revision process.[9] Its value rests in rationally articulating the costs public institutions face in maintaining the basic functions necessary for any organization to exist (e.g., organizational leaders, human resources, procurement, etc.), preserving the institution's value as an asset of the state or local government, providing an array of academic programs with varied costs of delivery to a mix of students whose characteristics of income, academic preparation, race/ethnicity, age, and other attributes require different student supports with varied costs, and conducting other activities in the public

[9] A more complete discussion of the framework and its elements can be found on pages 45-51 of the final report for Virginia's Cost and Funding Study, which is posted at www.schev.edu/coststudy.

interest such as research and public service. The framework also connects these necessary elements with the state agenda through the integration of performance funding streams, one-time or multi-year (but not recurring indefinitely) funding to support the development and expansion of needed capacity (e.g., new programs to meet state or regional workforce needs, new initiatives to redesign student supports—one application using a recent example would be to have supported the matching requirement for the "Moonshot for Equity" partnership with EOU, BMCC, and TVCC), funding to incentivize collaboration across institutions, and funding for the recurring purchase of goods and services that individual public institutions (or consortia of them) are uniquely positioned to supply. Unpacking institutional budgets and state funding priorities in this manner paves the way to a set of specifications concerning which entities bear responsibility for covering what costs. For instance, the state (or the community college district, in the case of the community colleges) should bear full responsibility for the "frugal" base funding requirement; no tuition revenue should be required to support the preservation and the maintenance of a public asset, in a manner similar to a state park—the land it occupies is public and its maintenance and certain services are necessary even when the park sees no fee-paying visitors. Other elements of the framework have costs that can be shared between funding sources including students. At its most basic, the framework is depicted by Figure 6; a more complete version that is being adapted by Virginia is shown by Figure 7.[10]

[10] NCHEMS made additional modest changes to this diagram from what appears in the recently completed report to reflect the role of local funding, which is not significant in Virginia.

Figure 6. Taxonomy of Institutional Costs

	Category	Function and Roles	Funding Responsibility
	Other	Advancement, auxilaries, athletics, etc.	Self-support
	Research and Public Service	Grants management, community engagement, museums, arts, extension services	Self-support
	Innovation/Performance Enhancement & Equity	Investments in continuoous improvement in all areas	Mix
	Scale	Course sections, academic support, student services (tutoring, student health, organizaitons and activities, etc.)	Mix
	Scope	Breadth of academic programming offered, variation in costs of delivering different programs.	Mix
	Maintenance/Renewal	Strategy and planning, deferred maintenance, program/curriculum renewal and relevancy, personal and professinal development	State
	Foundational	Senior leadership, governance, compliance, debt obligations, foundational systems (LMS, public safety infrastructure, etc.)	State

Figure 7. Institutional Adequacy Funding Framework

			Category	Function and Roles	Funding Responsibility
Funding Model			Other	Advancement, auxilaries, athletics, etc.	Institution
			Externally Funded Research and Public Service	Grants management, community engagement, museums, arts, extension services	External Funders
	Incentive Funding Tied to State Goals & to Six-Year Plans		Purchase of Goods and Services	Funding for specific purposes, e.g., research on tobacco usage in Southwest Virginia, incentives to seed and support shared academic program delivery, noncredit offerings	Mix (State/Local & External Funders)
			Capacity Building	Funding needed to start new programs or fund initiatives prioritized by the General Assembly, the Governor's office, or through the 6-year plan process	Mix (State/Local, External Funders, & Tuition)
			Performance / Incentives	Factors in the model that recognize: activities related to strategic plan, closing equity gaps, economic development	Mix (State & Tuition)
	Cost Model	Variable Costs	Audience	Semester credit hours (SCH) weighted by student characteristic(s) or added weights applied to headcount	Mix (State/Local & Tuition)
			Scale & Scope	Semester credit hours (SCH) weighted by level and discipline	Mix (State/Local & Tuition)
		Fixed Costs	Preventative maintenance as applied to facilities, technology, and personnel	Shares of facilities replacement value of facilities, technology value, payroll (for professional development)	State/Local
			"Frugal" foundational funding	Benchmarked against similar institutions with relatively low spending on administrative expenses	State/Local

This framework complements this report's call for a clearer articulation of differentiated institutional roles and missions in multiple ways. First, in recognizing the varied costs of programs by scope (discipline and level), scale (enrollment), and audience (student characteristics), it guides the investment of state resources in ways that these elements combine to reflect an institution's mission. Second, by recognizing and integrating the need for new or expanded capacity, the framework encourages state appropriators to make rational investments in view of the specific role each institution plays. Fourth, the framework creates space for specific ongoing funding support to institutions that are providing a specific service, such as meeting the needs of rural populations, conducting applied research on problems that are regional issues, and the like. Fifth, once the framework and corresponding formula generate recommended funding levels by institution, Virginia will specify a targeted cost-sharing goal for each institution that will reflect the extent to which institutions in the Commonwealth are very different in terms of their ability to recruit nonresident students who pay a rate set in excess of the average cost to educate a student, as well as resident students with adequate financial means to cover their own costs of attendance. Finally, together with a clear set of differentiated missions, the framework creates space for the state to consider alternate ways of funding its priorities without abandoning its commitment to boosting student outcomes and eliminating completion gaps—for instance, Oregon could invest resources, as some other states do, in recruiting and retaining exceptional research faculty at designated institutions who can help power economic development, rather than supposing that additional state investments in the institutions that can make the best use of those faculty member should be funded according to the same set of formula calculations that reward low-income students' enrollment and success.

Much of this framework should look familiar to Oregon already, in that Oregon's current funding approach in the PUSF formula recognizes a "frugal" cost of operating that provides a uniform base of support for institutions by sector, with adjustments to that base made according to some fundamental differences in mission (e.g., a limited amount of additional funding is funneled to institutions according to their research activity), followed by activity-based allocation that accounts for variation in institutional costs according to discipline, level, and enrollment, and lastly by substantial funding to institutions on the basis of performance. In addition to a fuller articulation of the various ways in which the state can fund institutions to address its needs, the framework being explored by Virginia differs by building the recommended state appropriations levels from data on actual costs, as opposed to using the formula to proportionally allocate dollars to institutions. In actual practice, Virginia's legislature will have to make difficult decisions when state resources fall short of the framework's demonstrated funding need, but the framework gives its members—and the higher education policy community—a rational lens through which to set priorities for how to make the numbers fit, one which also conveys information about the degree to which funding levels are not adequate to support the actual costs.

f. The outcomes-based feature of the state's resource allocation model should reward production of all degrees and certificates of value—including certificates produced by continuing education (noncredit) programs.
   - HECC should have the responsibility of identifying which certificates are considered to be "of value." Value in this context cannot be limited to earnings but should also reflect positions that are essential to a well-functioning society even if they are not especially remunerative.
   - Extra weight should be given for degrees/certifications that are awarded in high priority workforce fields.
   - Extra weight should also be given for degrees/certificate that are awarded to individuals identified as being in priority population groups.
   - Collaboration should be included as one of the "outcomes" rewarded, such that institutions that deliver a portion of a student's earned credits will receive some of the funding associated with that award.

g. Affordability for Oregon resident students should be addressed as a topic of priority interest. Tuitions are high in Oregon (and state support is relatively low) and college participation is low. While there is no clear, proven cause and effect relationship—although research suggests that higher out-of-pocket expenses disincentivizes student enrollment and success, the correlation suggests a need to make improved affordability a tool in increasing college participation and retention. Fortunately, HECC's recent approval of a budget request seeking substantial increases in the Oregon Opportunity Grant and an expansion of Oregon Promise funds to four-year institutions indicates a willingness to do just that. Even so, a competition among institutions over a shrinking pool of college-age students intensifies, the financing of public colleges and universities will likely grow more complicated, challenging policymakers' capacity to weigh investment options with a clear picture of the likely impacts of their decisions. Oregon needs legislators and legislative staff to have access to sufficiently detailed information about how the evolution of institutional budgets is affecting affordability as a prerequisite for good policy and wise investments. More specifically, it is recommended that:
   - HECC's calculation of the share of students "unable to meet expenses with expected resources," which is provided for each institution as part of an institutional snapshot, should be packaged into a focused annual report on affordability and the elements of funding that contribute to the results of the institution-specific calculations, such that policymakers are better equipped to understand the likely impact of investment decisions.
   - This calculation should be disaggregated by income group, and also created separately for recent high school graduates attending full-time, adults attending part-time, and for students with dependents of their own.
   - A strategy be developed for systematically improving affordability for those students who are shown most disadvantaged in this calculation.

h. Oregon should also consider supplementing the OOG with additional funding to support the Student Contribution portion of the Shared Responsibility Model Calculation. The design of such a program should ensure that student employment opportunities are meaningfully related to their academic pursuits and it should effectively incentivize employers to contribute a portion of the overall funding that would be required. A potential model is Washington state's State Work Study Grant. Another potentially worthwhile example exists with Arizona's Earn to Learn program, which encourages advanced planning and savings by low- and moderate-income students through generous matching funds alongside student supports such as financial literacy education and coaching.

i. Oregon should consider imposing a requirement that high school seniors must complete a FAFSA as a condition of graduating. Such a mandate has proven to be useful in making students more aware of the opportunities for postsecondary education and training and how they are increasingly linked to economic mobility, as well as more knowledgeable about the costs of college. Six states have so far enacted a FAFSA requirement as a condition for high school graduation, and others are considering a similar mandate.[11] The policies that are most effective make ample provisions for exceptions and alternative pathways, such as enlisting in the military, and also ensure wraparound services to assist in the completion of the form itself. Some have even embedded the requirement in college and career preparation courses. But the early returns suggest that states with a FAFSA requirement have seen a boost in college-going rates among targeted populations.[12]

j. One way to slow the pace of rising costs of higher education would be to recognize that Oregon institutional costs are partially driven by the rapid increase in employee benefits and their comparably large share of total compensation, and to address this imbalance by separating the employees of public institutions from the state benefits plans.

6. **Accountability.** Accountability is an underutilized tool that can build support for higher education if employed strategically. It is suggested that:
   a. A single statewide accountability report be produced annually, a report that indicates progress toward achievement of state goals and the contributions of each institution to those goals on key metrics. HECC already produces evaluation reports (which are called for in statute) for each of the four-year institutions on a biannual basis, as well as statewide and institution-specific snapshots that present key indicators. These reports are valuable insofar as they are appropriately aligned with the state's

[11] ECS (2021). https://ednote.ecs.org/an-inside-look-at-fafsa-completion-as-a-graduation-requirement/.
[12] Granville, P. (2020). *Should States Make the FAFSA Mandatory?* Retrieved April 5, 2021 from https://tcf.org/content/report/states-make-fafsa-mandatory/?agreed=1&agreed=1; DeBaun, B. (2019). *Survey Data Strengthen Association Between FAFSA Completion and Enrollment.* Retrieved from https://www.ncan.org/news/news.asp?id=456025; Novak, H. & McKinney, L. (2011). "The Consequences of Leaving Money on the Table: Examining Persistence Among Students Who Do Not File a FAFSA," *Journal of Student Financial Aid* 41(3). Retrieved from https://ir.library.louisville.edu/jsfa/vol41/iss3/1/

strategic priorities, including metrics that are comparable across institutions as well as those that are uniquely capable of addressing institutional performance in achieving state goals relative to their separate missions, assess the way investments by the state are paying off in the achievement of state goals (e.g., is the funding model working properly and are state financial aid programs contributing effectively?), and are widely shared and utilized by the legislature.

b. Affordability be included as a core element of this report, with content as described in the preceding recommendation.
c. The report be made the centerpiece of an annual meeting of key educational leaders, legislators, business leaders, and executive branch representatives. The purpose of the meeting should be to go beyond the report to the identification of strategies for improving the state's performance on key indicators. These strategies can be utilized to create a legislative agenda for higher education for the following legislative session.
d. Access to data by institutions be improved. Institutions report being eager for information, but sometimes find it challenging to obtain good data. In part this is due to variation in institutional capacity to make sense of their own data—the community colleges described recent HECC analyses as particularly intriguing. It also reflects a desire to get information about how their graduates fare in Oregon's workforce, as well as those students who leave without a credential. HECC has extensive data holdings, including engagement with other state agencies with valuable supplemental data, and talented staff that produce careful analyses principally for the public and policymakers. Additional emphasis by HECC on working to answer some of the most pressing institutional questions can support institutional decision-making, especially among those with less capacity for institutional research and effectiveness, and contribute to an improved climate of collaboration with the institutions. HECC can also increase its emphasis on brokering access to proprietary data for institutions—those data owned by other state agencies and those data owned and marketed by companies that do data aggregation—whether HECC does the analysis or facilitates the provision of data. For example, some of the public four-year institutions were eager to gain access to LightCast data, for which HECC has helped broker an agreement on behalf of the community colleges.

7. **Conduct a policy audit.** The recommendations presented above describe the steps the state, the institutions, and HECC should take in order to improve higher education's capacity to serve the needs of the state, its residents and its employers. However, in the course of the project, it became clear that there are some things that they should quit doing. To identify that set of policies and procedures/processes that serve as barriers to successfully pursuing and achieving goals, it is recommended that the HECC conduct (or sponsor the conduct of) what NCHEMS calls a "policy audit." Such an audit is a systematic review of policies and procedures done against a template of asking what it is about these policies that serve as barriers for outcomes attainment or as disincentives for institutions to undertake activities that would yield desired outcomes. The conduct of such an audit typically involves a thorough review of key statutes and policies and a series of interviews

with key informants—those individuals who, because of their positions, are keenly aware of what works and what does not in the implementation of state and institutional policies. In cases where NCHEMS has conducted such audits, a list of steps institutions, state agencies, and the legislature can take to improve overall performance has been developed. Experience indicates that legislatures respond positively to such lists because they detail productive actions that they can take at no or little cost.

8. **Strive to cultivate a culture of collaboration and mutual trust between and among HECC, universities, and colleges.** Oregon's public four-year sector is not far removed from major governance reform—the dissolution of the Oregon University System and the creation of the HECC. Such fundamental change is inevitably disruptive, and the impacts routinely linger for years as leaders change, practices and processes are reimagined, implemented, and revised. Institutions recently granted their independence resent the authority of a statewide entity when they perceive it to encroach on their flexibility, particularly when it exercises regulatory authority or takes up consideration of institutional funding streams. While this upheaval did not have the same profound effect on the community colleges, HECC absorbed the Department of Community Colleges and Workforce Development at the same time.[13]

   Research shows that coordinating boards, which sit between state policymakers and institutions, have a delicate assignment. They must urge sometimes uncomfortable change on institutions, including through their duty to make budget recommendations to the legislature, and simultaneously be a champion of the essential role that institutions (collectively and each in its own way) play in ensuring a healthy society and economy. Oregon is still adapting to its new way of managing its public investments in higher education, and given the challenge of the task, it is no surprise to us that there is room to improve the spirit of collaboration and mutual trust. Moreover, when the interests of independent institutions diverge, the fractures are more evident to the general public—or at least to key stakeholders—rather than being mediated within the confines of a single governing body. This raises the stakes for finding common ground and coherent ways forward. This spirit of collaboration is needed not just between the Coordinating Commission and the institutions, but also in the spaces between institutions and between the two- and four-year sectors.

   In any event, it is a reality that Oregon will continue to work through these issues as time passes. But where opportunities to accelerate this process are available, institutions and HECC should seize them. From NCHEMS' perspective, this is a recommendation that is as much a matter of style as of substance. It is a call for all parties to adopt a more intentional and consistent effort to engage on the basis of clear roles. For example, as it carries out its strategic action areas and identifies particular areas of special focus—developing/revising the state's strategic plan (and monitoring progress against it), refining and implementing finance models, coordinating articulation and transfer, improving

[13] It also absorbed the Oregon Student Assistance Commission at this time.

affordability for students, conducting visible advocacy for higher education in the legislature, etc.—HECC can double down on its efforts to work collaboratively with institutions to achieve solutions. At the same time, HECC should restrict its activities in areas less central to their role—functions that are legitimately within the purview of the Boards and management of institutions—without limiting its attention to ways that institutional collaborations can enhance services, streamline student experiences, and achieve efficiency. Meanwhile, individual institutions can recognize their own roles and limitations, focusing on those things at which they excel and contributing to HECC's efforts to organize a "best-fit" solution to challenges ahead. At points, this may require a final decision if consensus proves elusive, and when such conditions are found in the spaces between institutions, HECC may be called upon to make that decision. But any such circumstances should be preceded by ample consultation with the institutions.

Conclusion

Oregon is not taking full advantage of its major intellectual assets, its colleges and universities, to create a more prosperous, equitable, and attractive state. Creating such a state will inevitably require additional, targeted investments in its postsecondary institutions. But more important, it will require creation of a common vision for the nature of that desirable future state, the identification of the primary strategies for achieving that vision, and consistent use of available tools in ways that are reinforcing of each other.

Some of the recommendations presented are directed at the HECC and at state policymakers. Most, however, are directed to the leaders of Oregon's institutions of postsecondary education. Regardless of actions (or inactions) of others, there is much that college presidents can do to improve the well-being of the individual and corporate citizens of the state. Most of these actions will require changes to the old ways of doing things—most specifically shifting from competitive strategies to collaborative strategies and putting students, rather than institutions, at the center of decision-making. This will not be easy. It will require on-going demonstration of real leadership. In no way is this meant to be disdainful of the efforts institutions have made to these goals, or to deemphasize the need to take actions that strengthen institutions; rather it is a recognition that the best way to benefit the providers of education is to ensure that the beneficiaries of that education are successful and happy with their college experiences.

Appendix A. Background of the Study, Methods, and Conceptual Framework

Background

In late 2021, the Oregon Council of Presidents (OCOP) and the Oregon Community College Association (OCCA), circulated a Request for Proposals (RFP) seeking expert assistance in developing the insights needed to "facilitate transformation of Oregon's postsecondary terrain." Summarizing the requirements of the RFP, the OCOP and OCCA were seeking an organization that could:

- Develop an environmental scan regarding the factors affecting postsecondary education in the state. This is interpreted to mean the needs of students with particular attention to those not now being served, the workforce needs of state and regional employers, and the economic development needs of regions and communities in the state.
- Identify the areas in which additional educational or research capacities are needed and the ways in which the utilization of existing capacities can be improved to meet the identified needs.
- Assess the ways in which policies and practices at both state and institutional levels can be improved to serve the needs of the state and its communities more effectively and efficiently. This includes addressing the question of whether the methods of allocating state resources to colleges and universities should be modified to better support the varied missions of the institution and to better align funding with the priority needs of the state. This also raises the question of whether the structure of higher education in the state—or more likely, the allocation of responsibilities and authorities within the existing structure—needs to be adjusted to make higher education more responsive to societal needs.
- Suggest innovative ways in which the existing educational assets represented by public colleges and universities in the state, as well as other providers—school districts, proprietary schools, apprenticeship programs, and on-line providers—can be deployed to better serve students and employers and communities throughout the state.
- Develop a set of recommendations regarding the steps that should be taken to better align higher education with the needs of its various constituents and to maximize the effectiveness and efficiency with which needed services are provided.

All aspects of the work must recognize—and affirm—the shared values regarding the equity agenda for higher education in the state. The Oregon Equity Lens states that:

> We believe that everyone has the ability to learn and that we have an ethical and moral responsibility to ensure an education system that provides optimal learning environments that prepare students and learners for their individual futures.

We believe that our community colleges, university, and workforce training systems have a critical role in serving our communities of color, learners experiencing poverty, and other underserved populations.

We believe that the students and learners from currently and historically underserved communities represent Oregon's best opportunity to improve overall educational outcomes. We have many counties in rural and urban communities that already have populations of color that make up the majority. Our ability to meet the needs of this increasingly diverse population is critical to successfully reach our State education goals.

We believe that resource allocation demonstrates our priorities and our values and that we demonstrate our priorities and our commitment to communities of color, learners experiencing poverty, and other underserved communities, in the ways we allocate resources and make educational investments. We believe in focusing postsecondary education and training resources to serve Oregonians where they are and who they are, with a priority on communities and populations that have been historically underserved.

We believe that communities, students, parents, educators, and community-based organizations have unique and important solutions to improving outcomes for our students and educational systems. Our work will only be successful if we are able to truly partner with these stakeholders, engage with respect, authentically listen, and have the courage to share decision-making, control, and resources.

We believe every learner should have access to a full range of education and training options beyond high school, including apprenticeships, career certificates, and college degrees. These will show them multiple paths to employment yielding family-wage incomes without diminishing the responsibility to ensure that each learner is prepared with the requisite skills to make choices for their future.

We believe quality postsecondary education and training should be accessible and affordable for Oregonians, and students should not have to struggle with basic needs including, homelessness, housing insecurity, and food insecurity.

We believe in supporting education and training institutions in continuing to transform, expand, and redesign their outreach and delivery models to engage today's learners, including: communities of color; adults, parents, and other non-traditional learners; low-income populations; and other marginalized communities.

We believe the rich history and culture of learners and multi-lingual Oregonians are a source of pride and an asset to embrace and celebrate. We believe that speaking a language other than English is an asset and that our education system must celebrate and enhance this ability.

We believe in the critical importance of culturally responsive teaching and workforce diversification. An equitable education system requires providing educators with the tools and support to meet the needs of each student, and a dedicated effort to increase the culturally and linguistically diverse educators who reflect Oregon's rapidly changing student population. Our institutions of postsecondary education and training, and the P-20 system, will truly offer the best educational experience when their faculty, staff and

students reflect this state, its growing diversity, and the ability for all of these populations to be successful in their educations and ultimately in their careers.[14]

OCOP and OCCA selected the National Center for Higher Education Management Systems (NCHEMS) to conduct the project. In addition to its own staff, NCHEMS' project team included members of the Policy Analysis and Research unit of the Western Interstate Commission for Higher Education (WICHE).

Methods

In carrying out the project, NCHEMS worked closely with the staff leadership of OCOP and OCCA as well as with an Advisory Panel comprised of three university presidents and three community college presidents. This group provided guidance throughout the project and, at critical points, provided feedback and comments on the work products developed by NCHEMS.

The core work of the project was an extensive set of data analyses that served to place the economic and demographic conditions of Oregon and regions within the state, as well as of its public colleges and universities, in a comparative national and international context. Charts and graphs summarizing the results of these analyses we presented in an Interim Report submitted to OCOP and OCCA in February. Additional analyses were performed—and additional information displays developed—throughout the course of the project.

A curated set of this information was shared with stakeholders at a series of regional meetings conducted in early May. A trio of project team members visited university campuses; another pair met with representatives of groups of community colleges on one of the campuses in each region of the state. In each instance, team members met with institutional leaders, faculty, students, business leaders, economic and workforce development experts, and representatives of advocacy groups. At each site, key items of information were shared as the basis for eliciting responses concerning interpretation of the data presented, reactions to a list of issues presented, and suggestions for the steps needed to address those issues.

Based on the analytic findings and the feedback gathered in the course of the site visits, the NCHEMS project team developed a draft set of key findings and recommendations that was presented to the Advisory Panel as an incomplete final report on July 28, 2022. The panel members provided very useful feedback that resulted in the preparation of a revised document that was submitted to OCOP and OCCA on July 30. This document included not only findings and observations but answers to a set of specific questions presented in the RFP. This revised document was used as the basis for a final set of conversations with college and university leaders. Community college presidents were consulted as a group during their annual retreat in Astoria. University presidents and the leadership teams were consulted in a series of meetings on their individual campuses. The exception was Eastern Oregon University where the meeting was conducted as a Zoom meeting.

[14] This language includes updates to the Equity Lens that were adopted since the issuance of the RFP.

The long list of data analyses (more than 300 charts and graphs were developed in the course of the project) and the extensive consultations with stakeholders shaped the findings and recommendations presented in this report.

Organizational Context

A decade ago, Oregon made major changes in the governance structure of its higher education system, eliminating the Oregon University System, giving each university its own Board, establishing the Higher Education Coordinating Commission (HECC), and moving the functions of the Department of Community Colleges and Workforce Development and the Oregon Student Assistance Commission into the HECC. There were very good reasons for making these changes—allowing the universities to be more entrepreneurial and responsive to workforce demands in the state and their respective regions and boosting their capacity to raise funding from sources other than the state, among other benefits. However, this fundamental reorganization left a void, namely the weakening of connective tissue between the public institutions, which has exposed all of them to rapidly intensifying competition of the postsecondary marketplace without affording them an equal capacity to respond. These conditions have led to some arguments in favor of reconstituting the system—or at least a portion of it. But governance reform as a solution to the challenges of operating public institutions has been a far too convenient one, too quickly grasped, by states throughout the nation. In reality, states with diverse governance models are as capable of defining and implementing a clear agenda for leveraging postsecondary education to meet state needs as they are capable of floundering in exercising such leadership. Thus, large-scale governance structures are not in-and-of-themselves generally the source of the problem and, in any event, major changes inevitably cause significant disruption and take years—often decades—to settle.

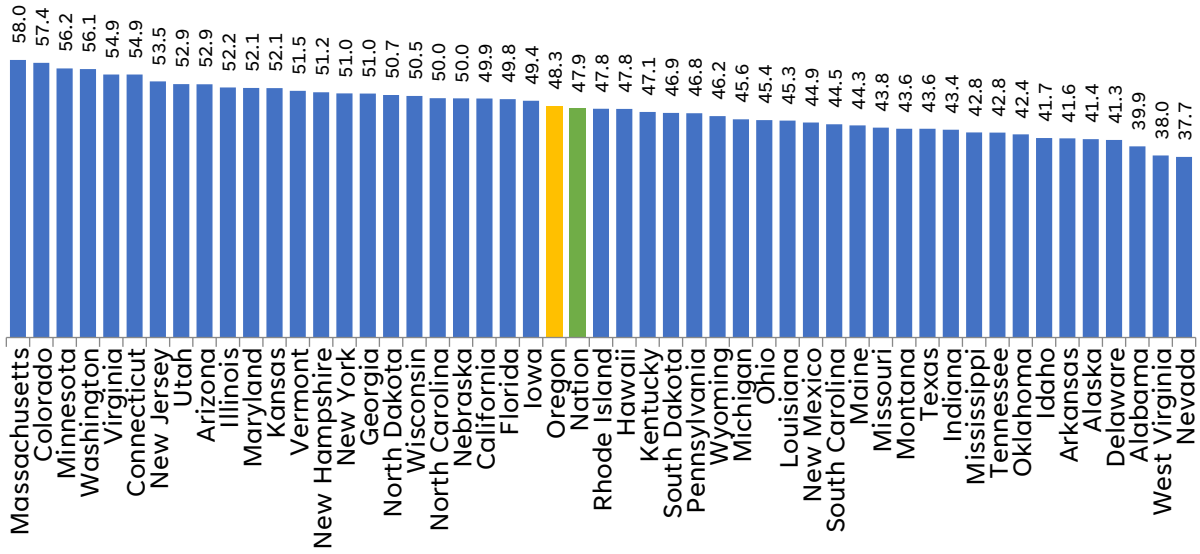
Instead, it is much more complicated than that. But regardless of the governance structure, continuous improvement can be achieved when there is a clear set of goals that have widespread acceptance and the available policy tools are utilized in ways that are aligned with those goals—they are applied in ways that reinforce each other.

Appendix B. The Context for Higher Education in Oregon

An important initial step in developing a set of recommendations for Oregon's public colleges and universities is to make some observations about Oregon, including a look at how conditions differ within the state and how they compare with other states and the nation.

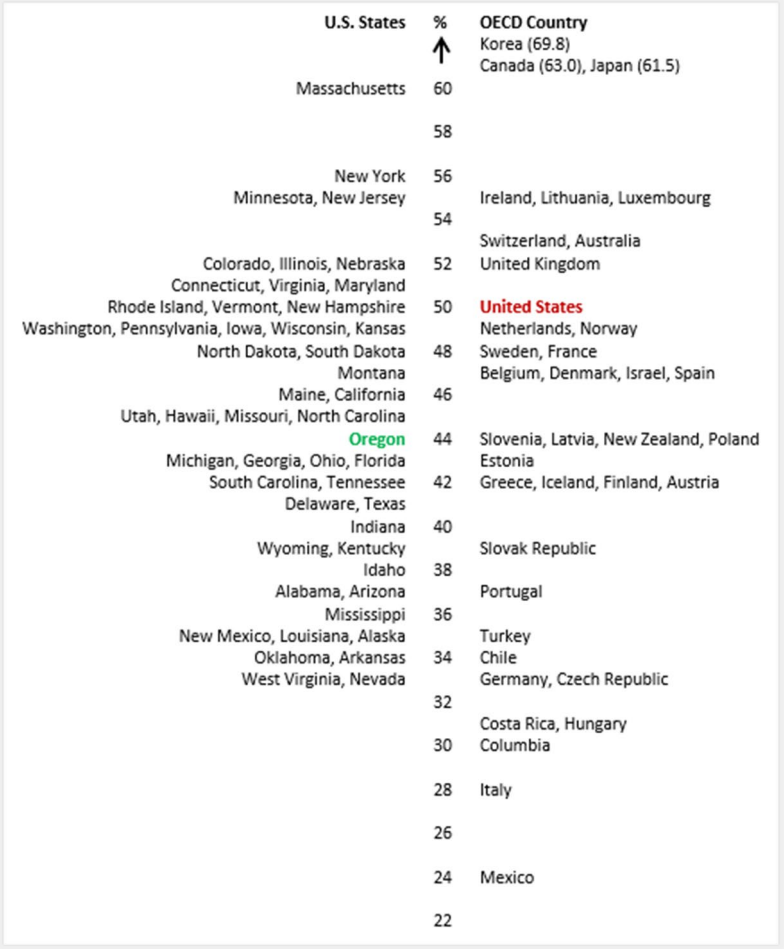
First, Oregon's educational attainment for working-age adults is comparable to the nation's as a whole (Figure 8). A closer look at the population of young adults tells a different, more troubling story, however: with that demographic, Oregon trails the nation significantly (Figure 9). Perhaps not coincidentally, Oregon is a net importer of college-educated talent.

Figure 8. Percent of Residents Ages 25-64 With A High-Quality Certificate or Higher, 2018



Source: U.S. Census Bureau, 2018 American Community Survey 1-Year Public Use Microdata Sample.

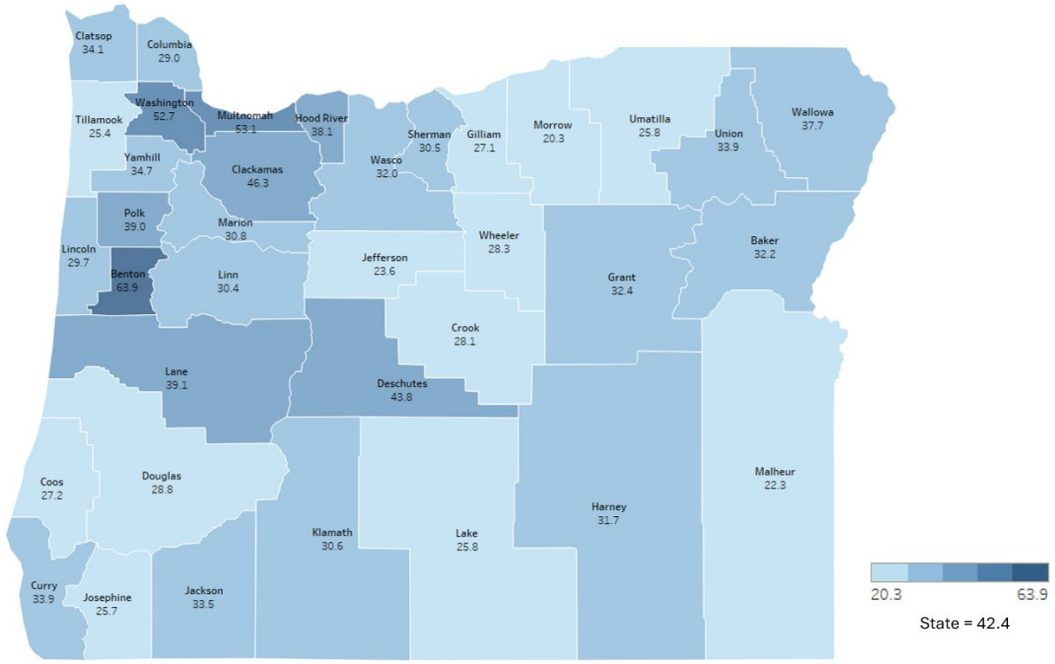
Figure 9. Tertiary Educational Attainment of the 25-34 Year Old Population, U.S., States, and Nations, 2019



Source: 2021 OECD Education at a Glance (for year 2019); U.S. Census Bureau, 2019 American Community Survey One-Year Estimates; Table B15001.

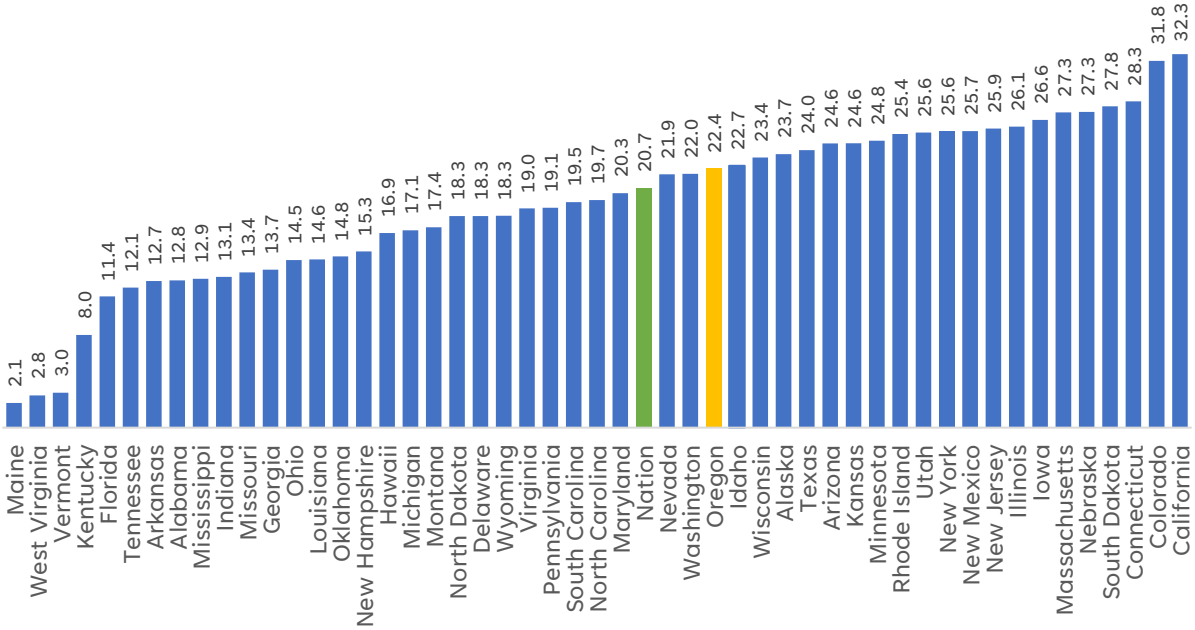
Educational attainment levels vary substantially across the state (Figure 10). The best-educated county is Benton County, with 63.9 percent of adults aged 25-64 with an associate's or higher degree, a proportion that is more than three times higher than the least-educated county, Morrow County. More generally, the northern half of the I-5 corridor, plus Deschutes County, is far better educated than the vast remainder of the state. Oregon also has a slightly higher-than-average gap in attainment rates by race/ethnicity (Figure 11). The gaps are especially acute for Hispanics.

Figure 10. Percent of Adults Aged 25-64 with Associate Degrees & Higher, by County (2013-17)



Source: U.S. Census Bureau, 2013-17 American Community Survey Five-Year Estimates; Table B15001.

Figure 11. Difference in College Attainment Rates Between Whites and Underrepresented Minorities, Ages 25-64, 2017-19

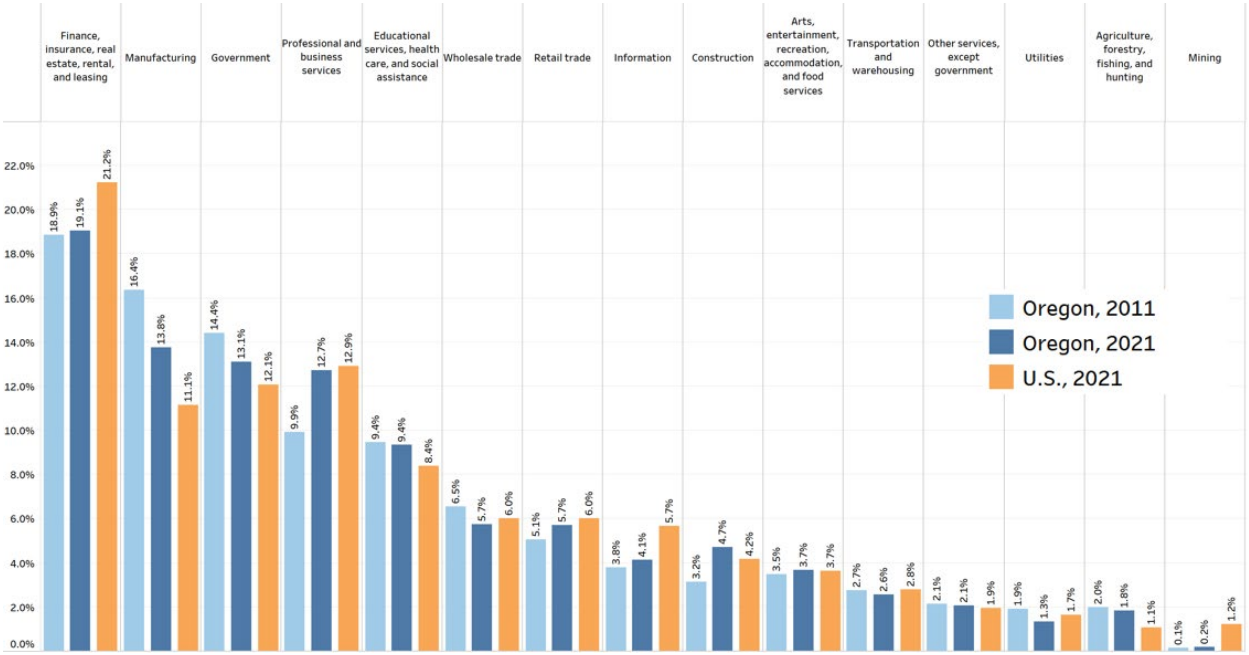


Source: U.S. Census Bureau, 2017, 2018, and 2019 American Community Survey One-Year Public Use Microdata Samples.

Oregon's economy has been changing over the last ten years (Figure 12). Two of the state's three largest industries are manufacturing and government. These two industries make up a larger

share of Oregon's Gross State Product than they do of the national Gross Domestic Product, yet both shrank as a portion of Oregon's economy from 2011 to 2021. At the same time, professional and business services, which is smaller in Oregon than it is nationally, grew to comprise a larger share of Oregon's economy.

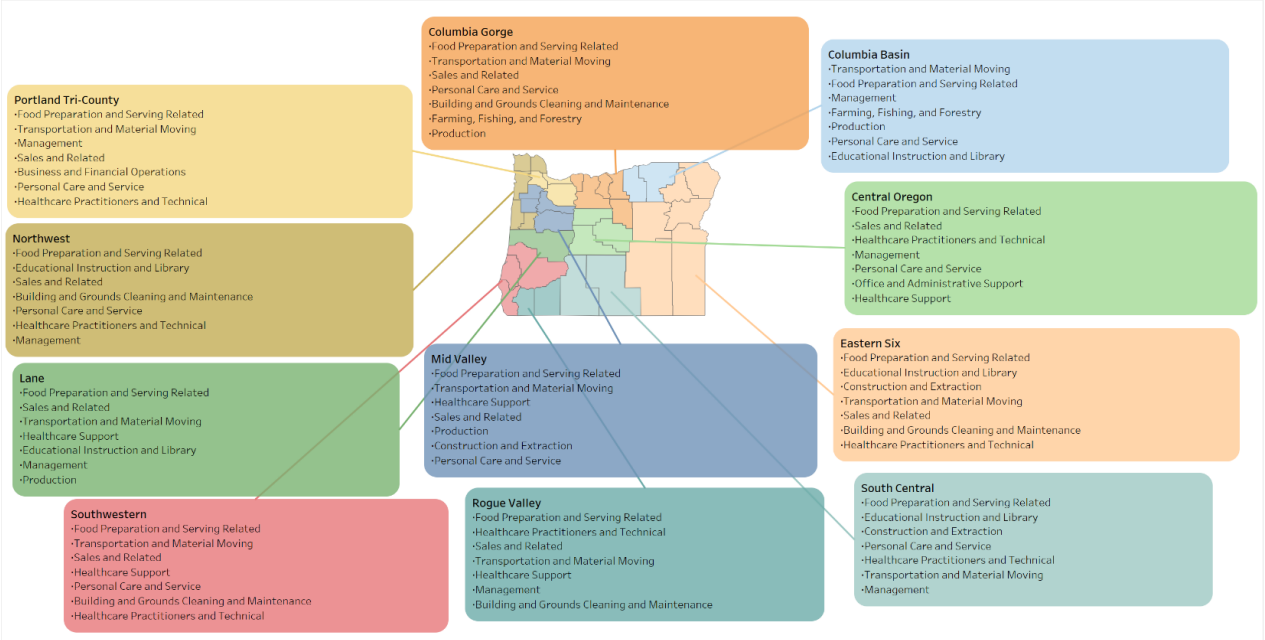
Figure 12. Percent of Gross State Product by Industry and Comparison to the Nation



Source: U.S. Bureau of Economic Analysis.

In terms of occupations, food preparation and serving occupations are projected to grow by the largest number of jobs from 2020 to 2030 in nine out of 11 of Oregon's workforce regions. Entry-level positions in this group of occupations, as well as most of the other top-growing occupations across all regions of the state, generally do not require a postsecondary degree (Figure 13). Many of the occupations in these clusters also experience considerable turnover or tend not to have wages sufficient to meet a minimum standard of living.

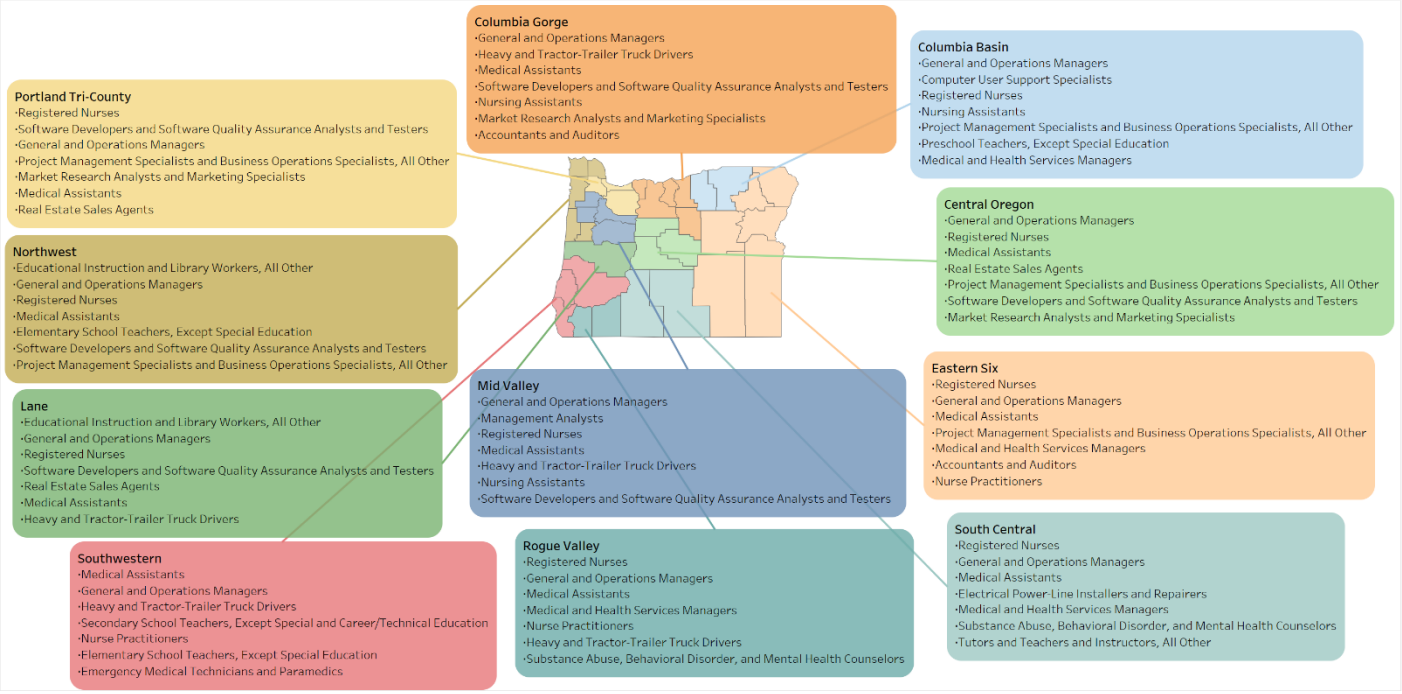
Figure 13. Occupations with the Largest Projected Growth, 2020-2030



Source: Oregon Employment Department, qualityinfo.org. Occupations are based on 2-digit SOC code.

Among occupations with a typical entry level requirement of a postsecondary certificate or degree, the occupations expected to grow by the most jobs between 2020 and 2030 include general and operations managers, registered nurses, medical assistants, and educational instruction and library workers (Figure 14). Regional variation in occupational demand is significant, with software developers and project managers near the top of the list in the northern I-5 corridor. Positions relating to manufacturing and logistics are in demand in the eastern parts of the state. Real estate jobs are expected to grow in Central Oregon and in Lane County. Across all Oregon regions, occupations in healthcare, business (e.g., project management, management analysts), and education are expected to grow.

Figure 14. Occupations Typically Requiring Postsecondary Education with the Largest Projected Growth, 2020-2030



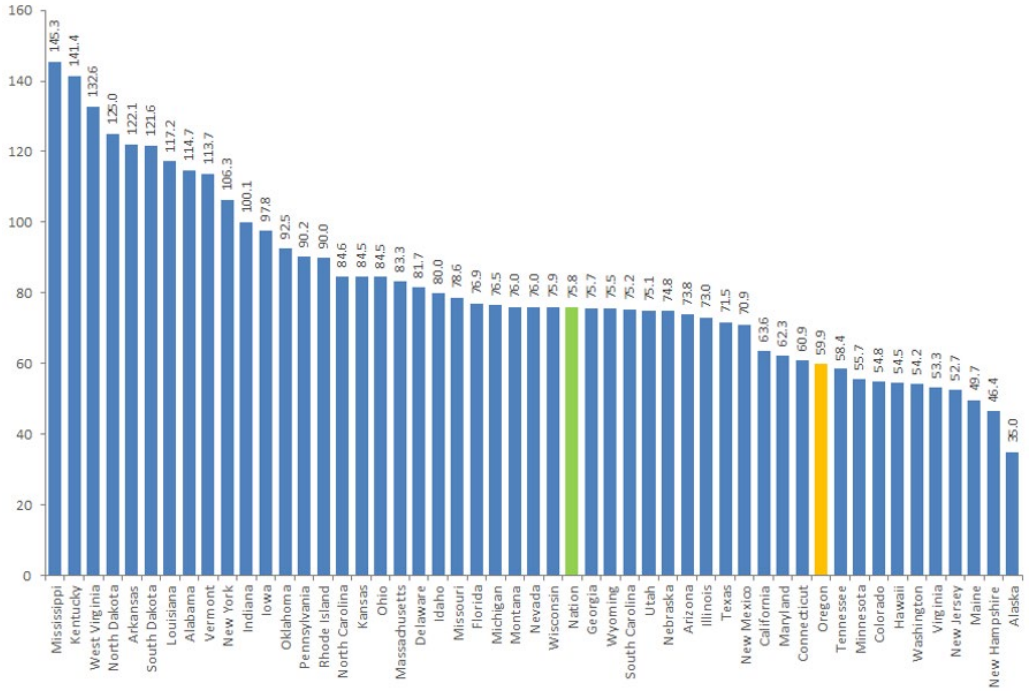
Source: Oregon Employment Department, qualityinfo.org. Occupations are based on 2-digit SOC code.

As Oregon's economy evolves and the workforce demands change along with it, there is a mismatch between the graduates of Oregon's postsecondary institutions and the state's workforce needs, both in terms of the number of graduates and the program areas in which they are earning degrees and certificates. This analysis of labor supply and demand is resistant to precise estimates. While there is a strong relationship between programs and occupations in some fields (such as in technology and health care) not all programs map neatly to specific occupations; some programs—especially those in the liberal arts—proudly declare their intention to educate graduates for a wide variety of work. It is also common for young people to swirl among occupations and industries before they settle into a career. But even though these facts make it a challenge to achieve perfect alignment between educational programs and workforce demands, it is important for states to use these analyses to improve this alignment as a condition of being competitive in a global knowledge-based economy.

In many occupations (depicted with their respective median incomes in Figure 17), Oregon's institutions of higher education are not producing enough graduates to fill jobs that require postsecondary education, which means the state relies on importing college graduates from elsewhere. This gap is especially acute in STEM and health fields, where the ratio of graduates to employees is notably below the national average (Figures 15-16). As occupations within those fields grow, this gap may grow even larger. There are also many more jobs in business, marketing, and management than there are graduates in these fields, though this gap is somewhat exaggerated since graduates from a wide variety of programs go on to work in those occupations,

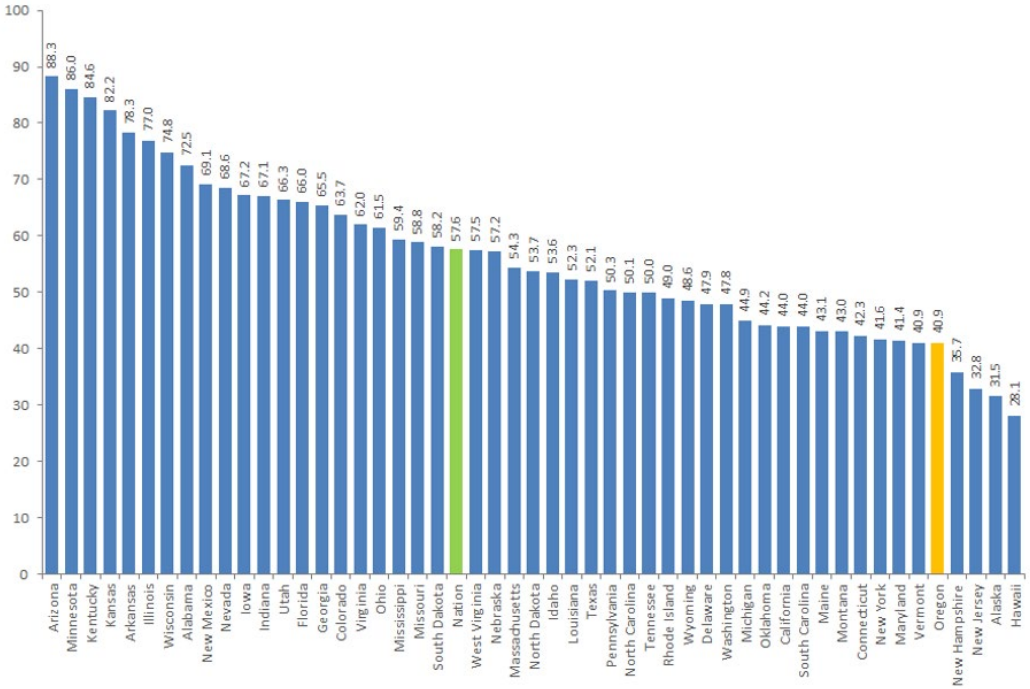
and many of the retail jobs serve as stepping-stones to individuals who are eventually destined for other professional careers.

Figure 15. STEM Credentials Awarded per 1,000 STEM Employees, 2018-19



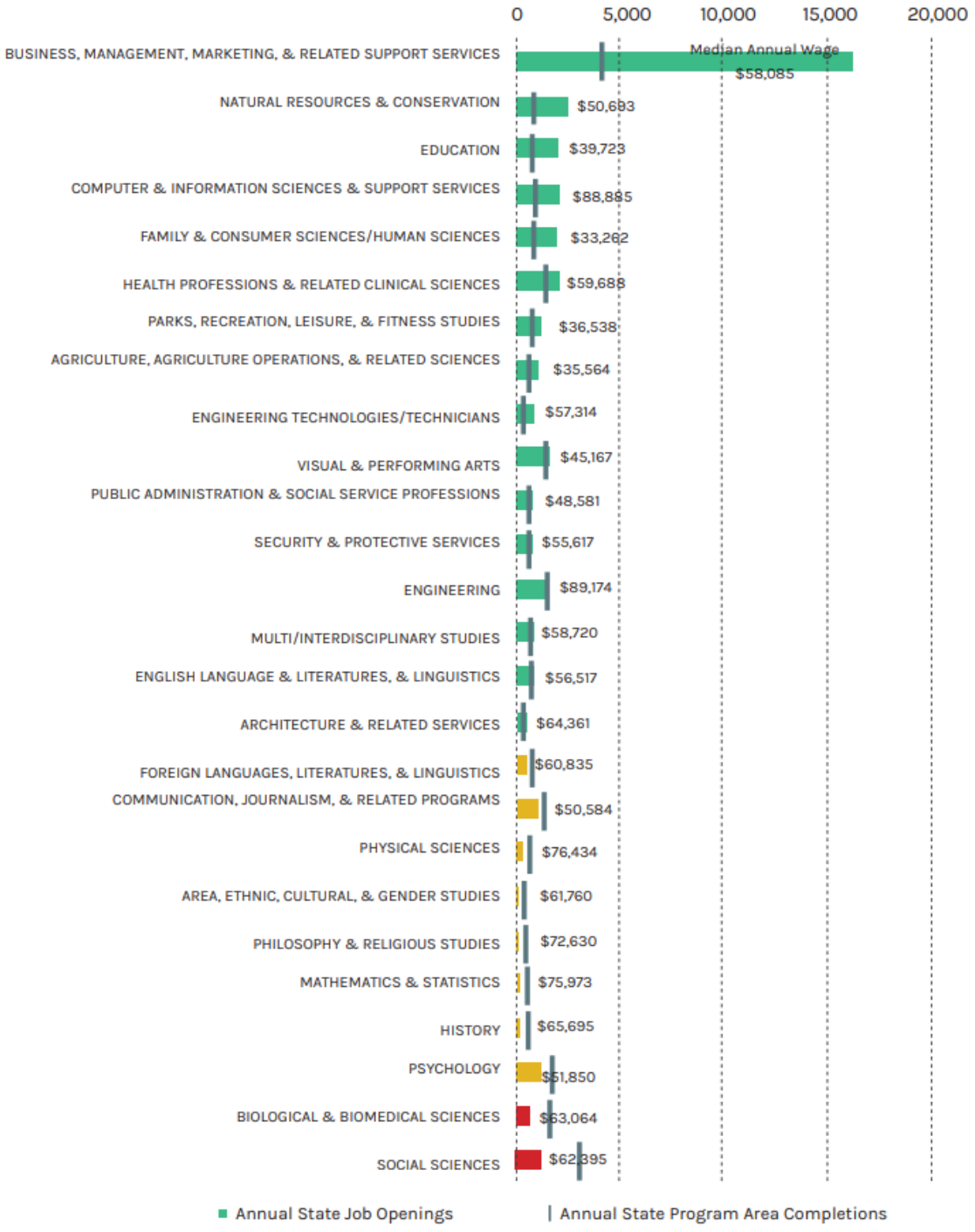
Source: NCES, IPEDS 2018-19 Completions File; U.S. Census Bureau, 2019 American Community Survey.

Figure 16. Health Credentials Awarded per 1,000 Health Employees, 2018-19



Source: NCES, IPEDS 2018-19 Completions File; U.S. Census Bureau, 2019 American Community Survey.

Figure 17. Occupational Supply and Demand, 2019



Note: This graph was included in the Oregon Strategic Capital Plan developed in 2019 using 2018 data for occupations and 2015-2017 data on completions. This chart has not been updated.

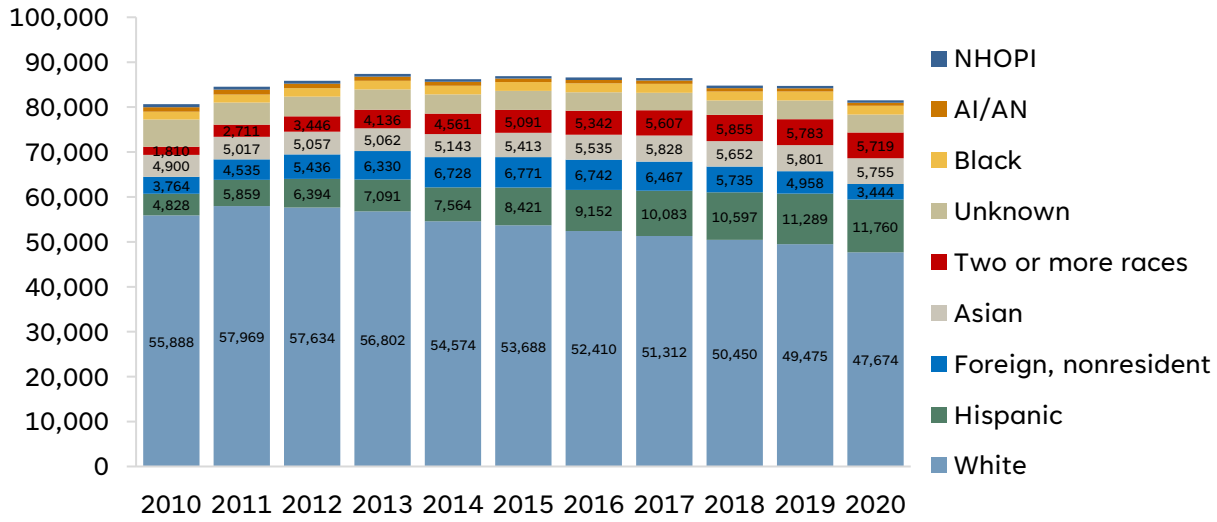
Source: EMSI; SmithGroup & NCHEMS (2019). *Strategic Capital Development Plan.*

Appendix C. RFP Questions & Answers

1. What are the expected patterns of demand for, and enrollment in, higher education in Oregon?

Recent trends indicate a sharp reduction in enrollment for Oregon institutions in recent years; most of that reduction has occurred among community colleges, but some of the universities are also dealing with serious downturns (Figures 18-22). In comparison to other states, Oregon's four-year sector has outpaced the modest enrollment growth the nation has witnessed, while the community colleges have seen deeper declines than the nation as a whole. The following charts show initial impacts on enrollment from the pandemic, but a fuller picture awaits the release of new data from NCES. In the meantime, the National Student Clearinghouse has shown that enrollment declines during the pandemic have been especially sharp among community colleges and broad-access four-year institutions.[15] Elite institutions and public flagships have fared far better in maintaining their enrollments. Impacts have also been especially heavy on students of color, low-income students, and adult learners around the country.

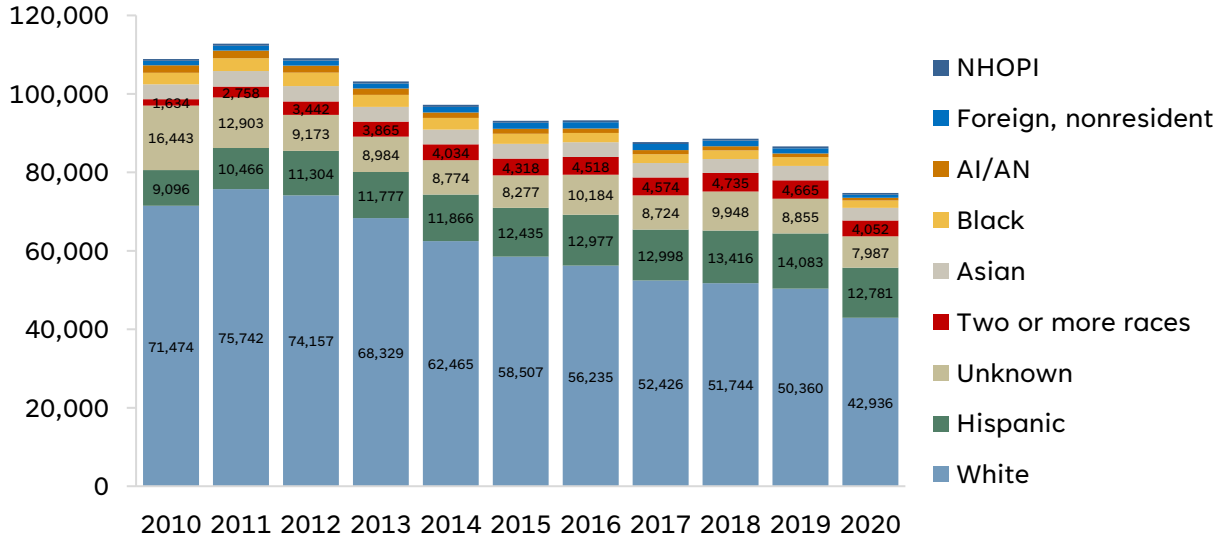
Figure 18. Oregon Undergraduate Enrollment, Public Four-Year Institutions, 2010-2020



Source: NCES IPEDS.

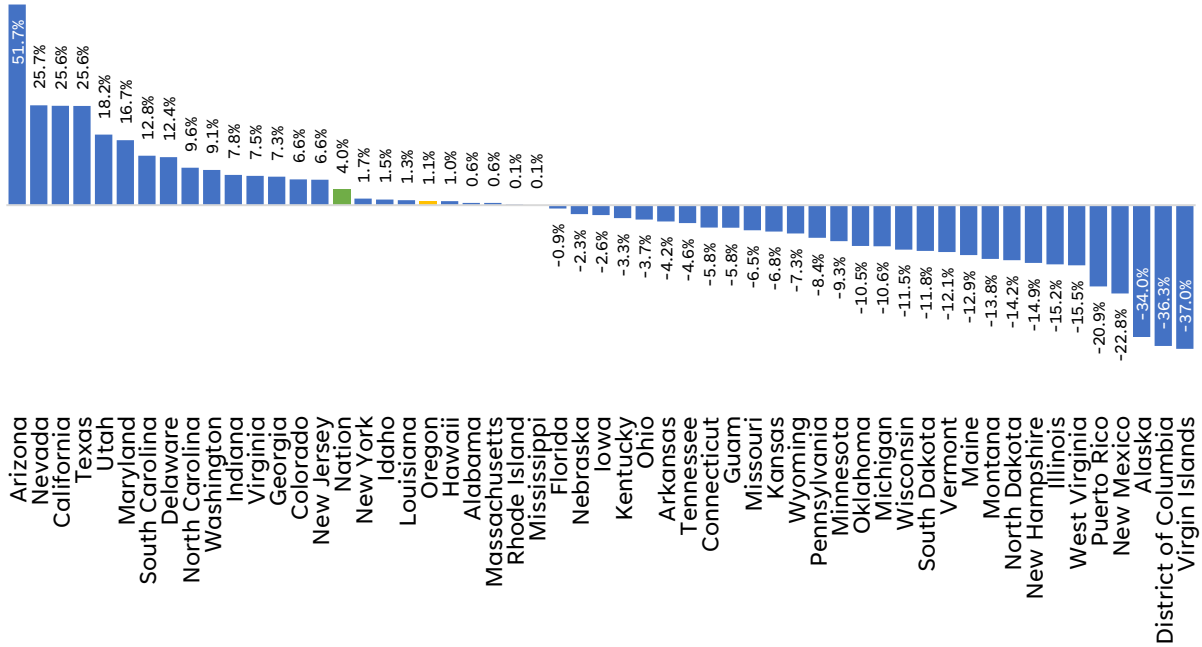
[15] See https://nscresearchcenter.org/publications/ for numerous publications and data tracking current term enrollment, rates of transfer, etc.

Figure 19. Oregon Undergraduate Enrollment, Public Two-Year Institutions, 2010-2020



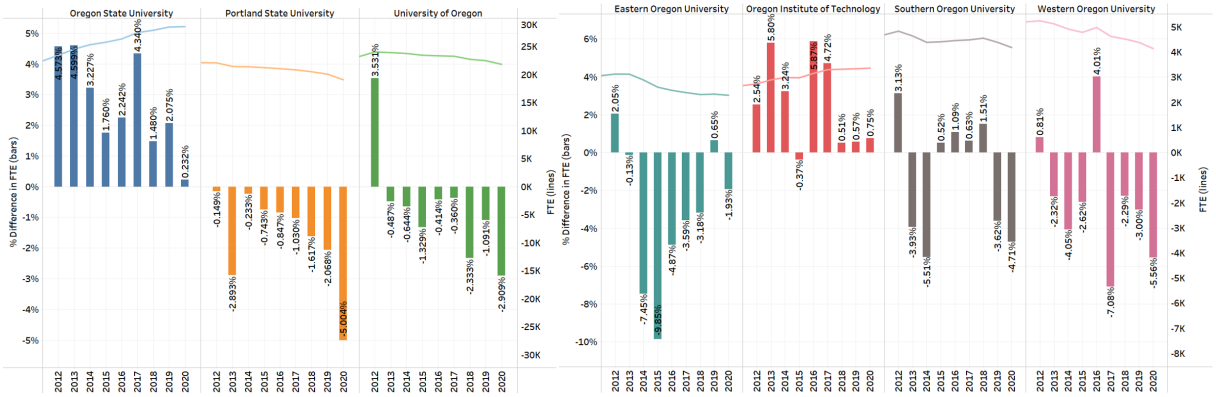
Source: NCES IPEDS.

Figure 20. Percent Change in Undergraduate Enrollment at Public Four-Year Institutions, 2010-2020



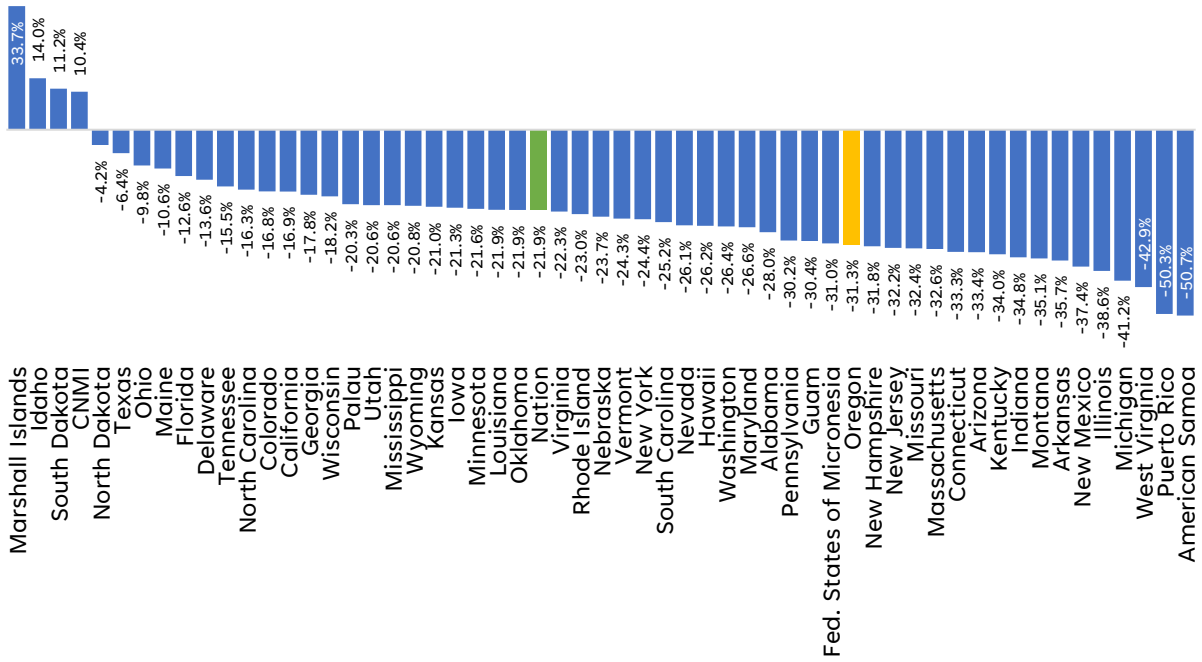
Source: NCES IPEDS.

Figure 21. Annual Student FTE Among Oregon's Public Four-Year Institutions, 2012-2020



Note: Bars represent year-over-year differences.
Source: NCES IPEDS

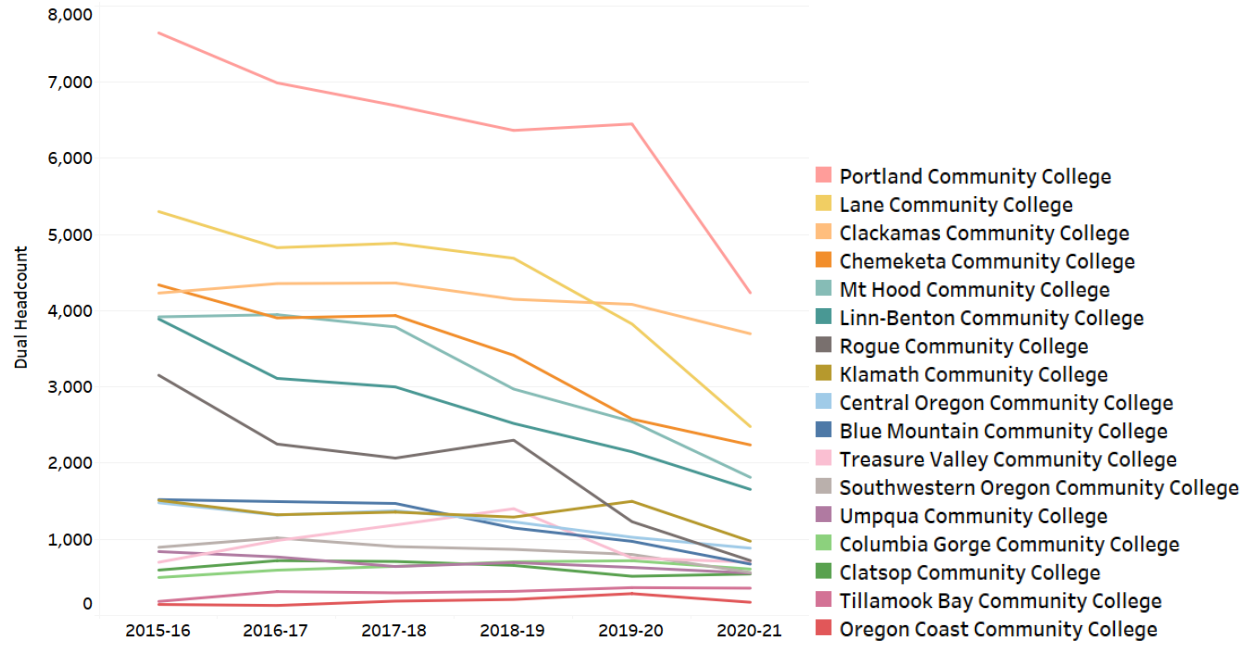
Figure 22. Percent Change in Undergraduate Enrollment at Public Two-Year Institutions, 2010-2020



Source: NCES IPEDS.

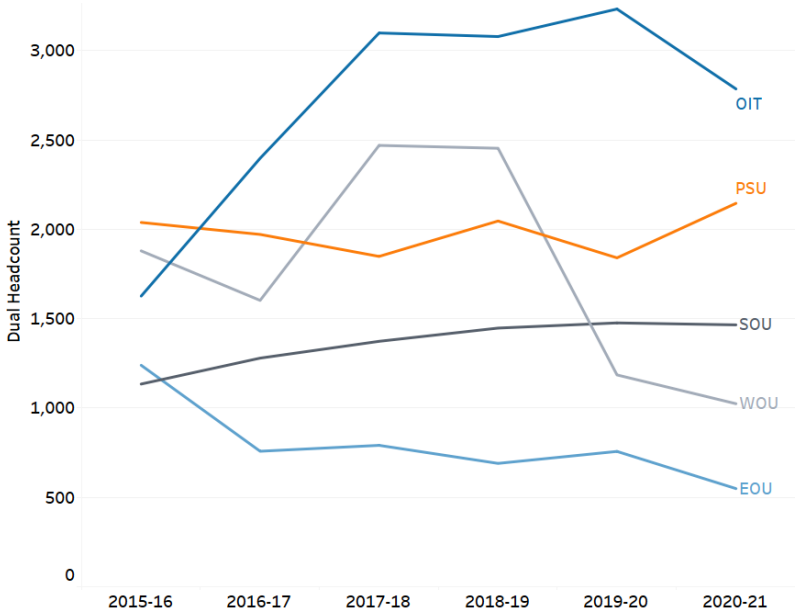
Accelerated Learning, or high school students enrolled in college credit, has also been generally declining for the past five years (Figures 23-24). The extent to which colleges rely on Accelerated Learning for enrollment varies; at Oregon's community colleges in 2020-2021, accelerated learning comprised between 11 percent (Portland Community College) and 51 percent (Tillamook Bay Community College) of total credit enrollment. At the universities, accelerated learning comprised between 10 percent (Portland State University) and 41 percent (Oregon Institute of Technology) of enrollment.

Figure 23. Community College Enrollment in Accelerated Learning



Source: HECC

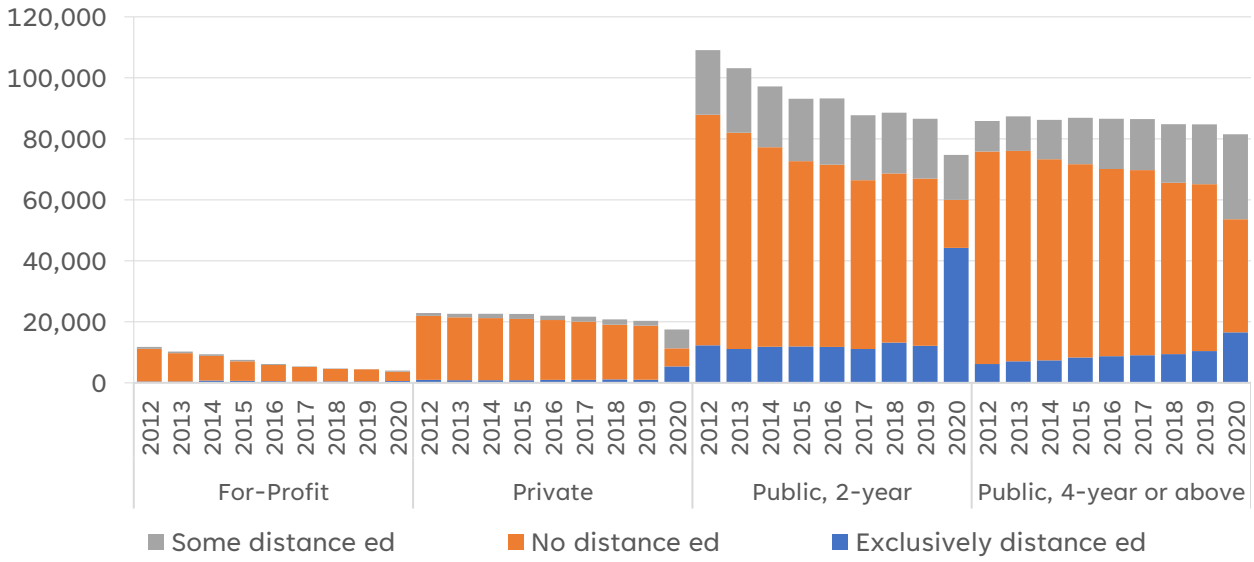
Figure 24. University Enrollment in Accelerated Learning



Source: HECC

While overall enrollment has been declining, almost all of the decrease has come from students studying exclusively in-person (Figure 25). Enrollment among students taking some or all of their classes via distance has generally either remained stable or increased. This trend started well before the COVID-19 pandemic, though it accelerated in 2020.

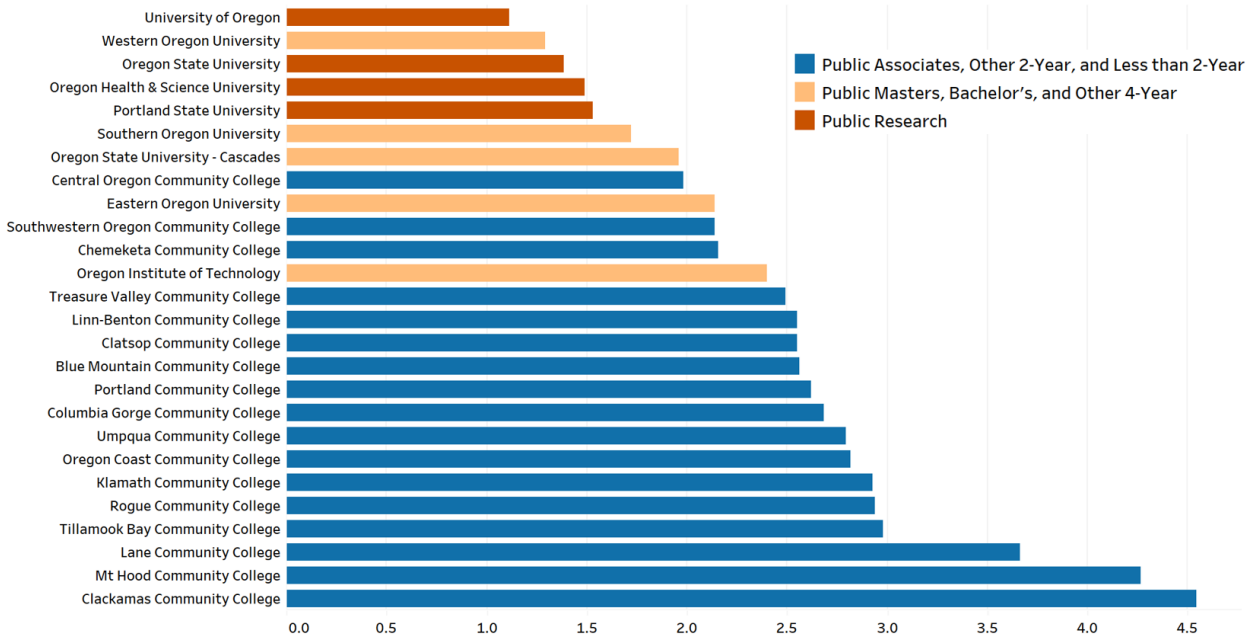
Figure 25. Undergraduate Enrollment at Oregon Postsecondary Institutions by Distance Education Status and Sector, Fall 2012 to Fall 2020



Source: NCES IPEDS.

Enrollment paints a different story when measured as headcount versus credits (FTE) (Figure 26). Institutions that enroll a larger percentage of part-time students will require more students to generate one FTE compared to institutions that enroll more full-time students. Overall, Oregon's four-year institutions have relatively lower headcount-to-FTE ratios compared to the state's community colleges, meaning the universities have lower percentages of part-time students. This can have important implications for funding. Some of the real costs facing institutions, such as credit instruction, are effectively measured based on FTE. Others, such as academic advising and financial aid processing, where a part-time student requires the same amount of institutional effort and services as a full-time student (possibly more since part-time students' are trying to follow a curriculum over a longer timeframe while juggling jobs and other life challenges), are better assessed based on headcount. Further, institutions that primarily serve part-time students will need to offer a different array of services, support, and academic offerings compared to those that serve primarily full-time students.

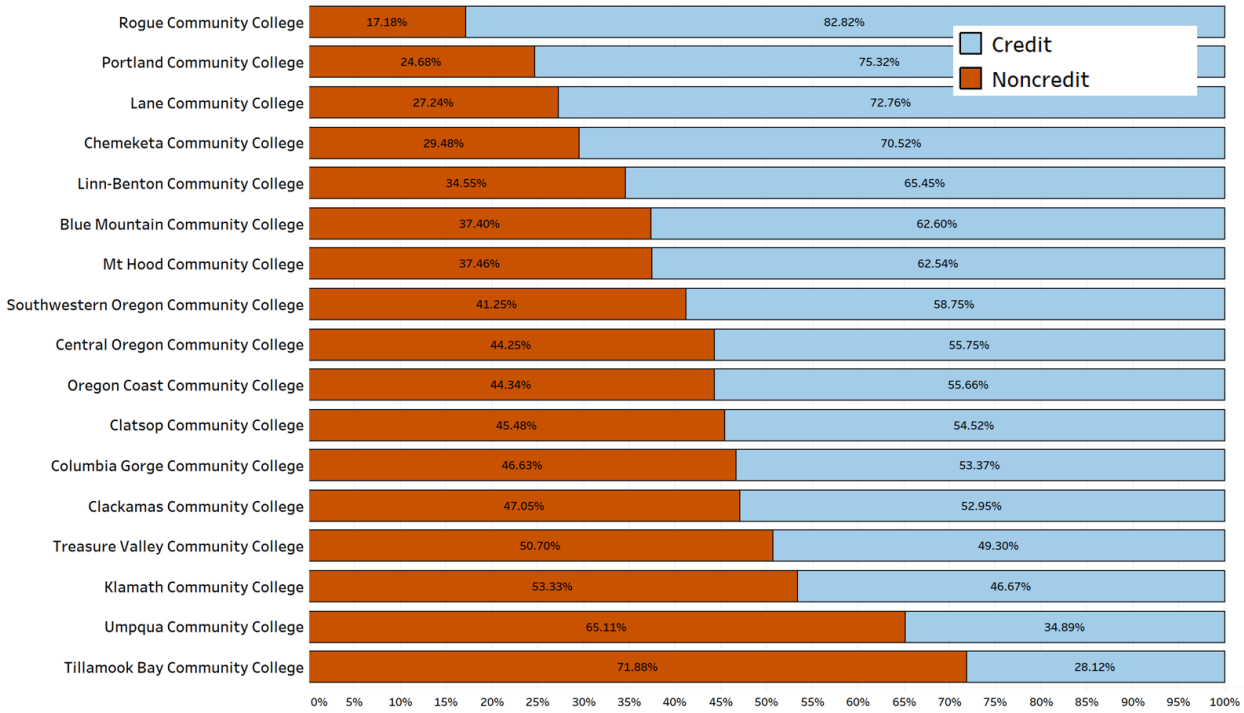
Figure 26. Undergraduate Headcount vs. FTE Enrollment, 2019-2020



Source: NCES IPEDS.

Oregon's community colleges differ from its universities, of course, but they also differ from each other as they strive to serve the unique needs of their individual service areas. The percentage of students enrolled in credit vs. noncredit course offerings varies markedly across the colleges (Figure 27). At Rogue Community College, over 80 percent of students are enrolled for credit, where at Tillamook Bay Community College fewer than 30 percent of students are taking credit courses. Non-credit programming includes both community education and also workforce-relevant programming, such as continuing education required for licensure in various professions. Non-credit programming is likely to grow as a share of the services offered by Oregon's community colleges as students seek to gain workplace skills as quickly as possible.

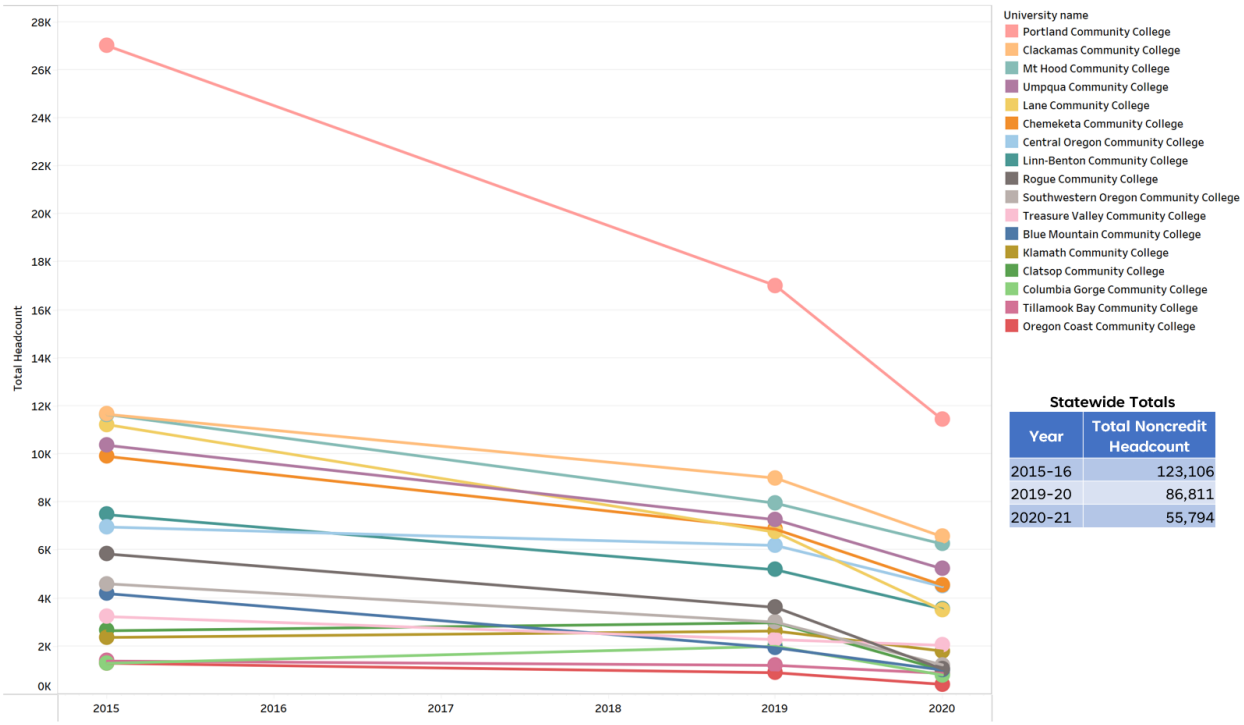
Figure 27. Credit vs. Noncredit Enrollment at Oregon Community Colleges, 2020-21



Source: HECC.

Since 2015, overall non-credit enrollment at Oregon's community colleges has decreased by 55 percent (Figure 28). This decline has happened across the state's colleges, though those colleges that rely more heavily on non-credit enrollment have seen greater impacts.

Figure 28. Noncredit Enrollment in Oregon Community Colleges Over Time



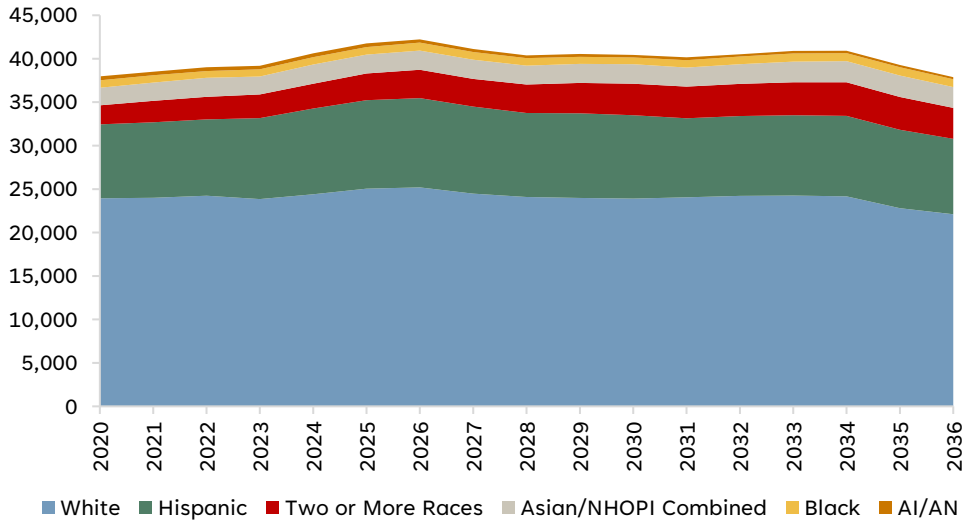
Statewide Totals

Year	Total Noncredit Headcount
2015-16	123,106
2019-20	86,811
2020-21	55,794

Source: HECC.

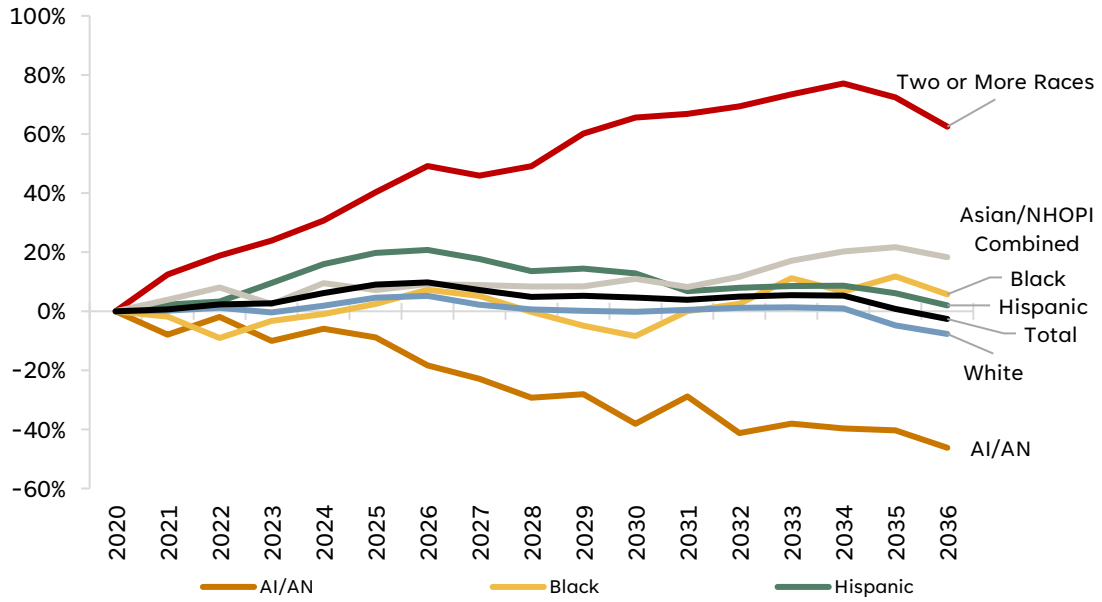
As in most other states in the nation, Oregon can no longer rely on a steadily increasing supply of high school graduates from which to draw students (Figure 29). Furthermore, the students who are the likeliest targets for college enrollment are rapidly diversifying as the projected pool of White high school graduates is expected to shrink as Asians/Pacific Islanders, Hispanics, and people of two or more races increase (Figure 30).

Figure 29. Projections of Oregon Public High School Graduates by Race/Ethnicity



Source: Western Interstate Commission for Higher Education (2020), *Knocking at the College Door* (10th Edition).

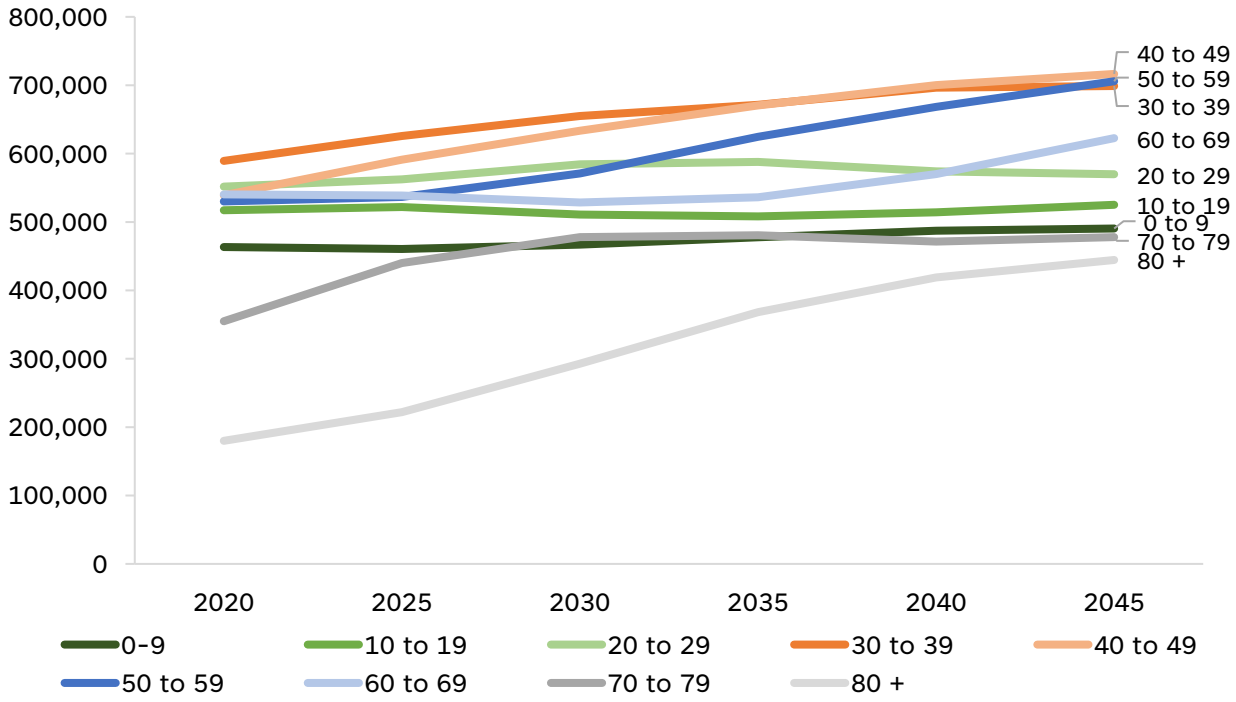
Figure 30. Projected Percent Change in Oregon Public High School Graduates by Race/Ethnicity



Source: Western Interstate Commission for Higher Education (2020), *Knocking at the College Door* (10th Edition).

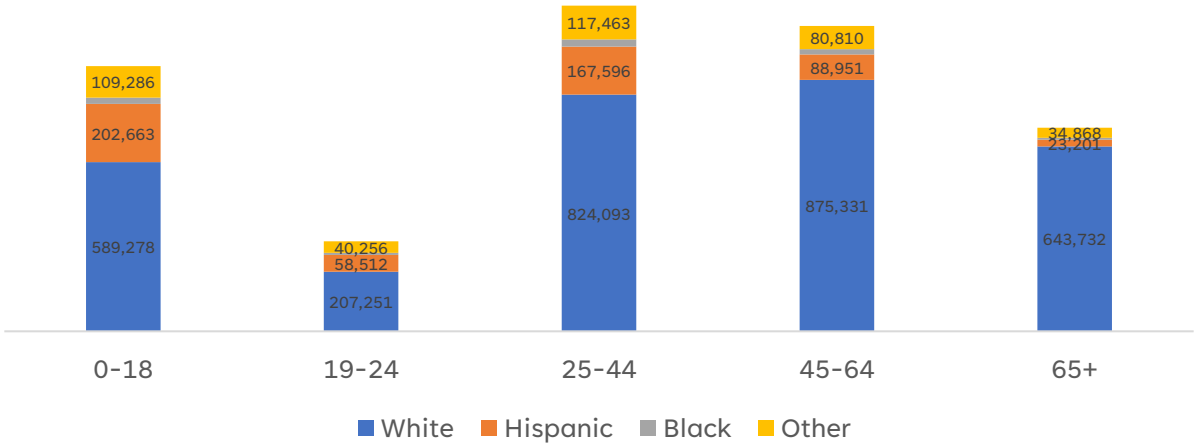
Compounding the pipeline challenge is the rapid aging and diversification of Oregon's population (Figures 31-32). Nearly all of Oregon's growth projected for the next 25 years will be among those over aged 30, while the growth in individuals—especially those of traditional college age—remains stagnant. In fact, the numbers of those aged 10-19 are expected to decrease. This portends significant challenges for Oregon's colleges and universities, if these trends cannot be changed. It also suggests that, in order to meet state workforce needs, Oregon will need to continue a strong focus on meeting the educational needs of its adult residents.

Figure 31. Oregon Population Forecasts by Age Group



Source: Portland State University, Population Research Center.

Figure 32. Oregon Population by Age and Race/Ethnicity, 2017



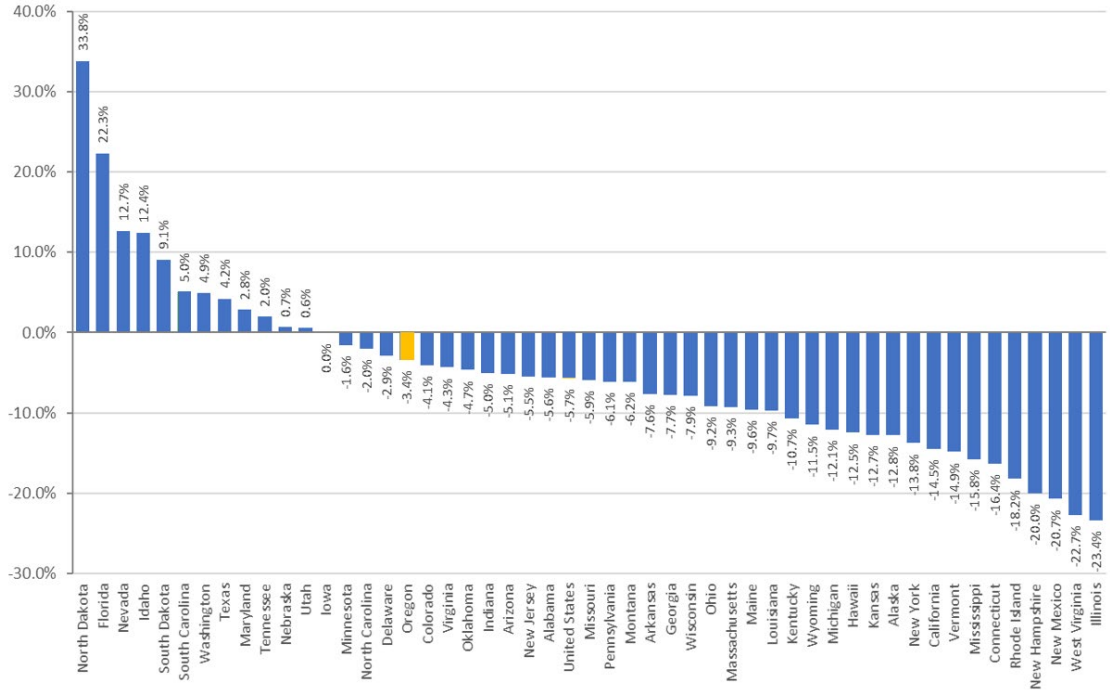
Source: U.S. Census Bureau, Population Division; SC-EST2017-ALLDATA6: Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and Two or More Races) by Age, Sex, and Hispanic Origin: April 1, 2010 to July 1, 2017; File: 7/1/2017 State Characteristics Population Estimates; Release Date: June 2018

Unfortunately, there is little relief to be found in other nearby states that have traditionally supplied a large number of non-residents (and the tuition revenue they bring with them). After peaking in 2024, California is projected to see a decrease of 11 percent over the subsequent

decade, or roughly 55,000 graduates (Figure 33). By contrast, high schools in Washington will continue to produce a relatively stable number of graduates. In Idaho, rapid growth in the number of high school graduates is expected to stop abruptly after 2026. But together those two growing states only generate about 100,000 to 110,000 graduates, compared to California's total output of about 500,000 graduates.

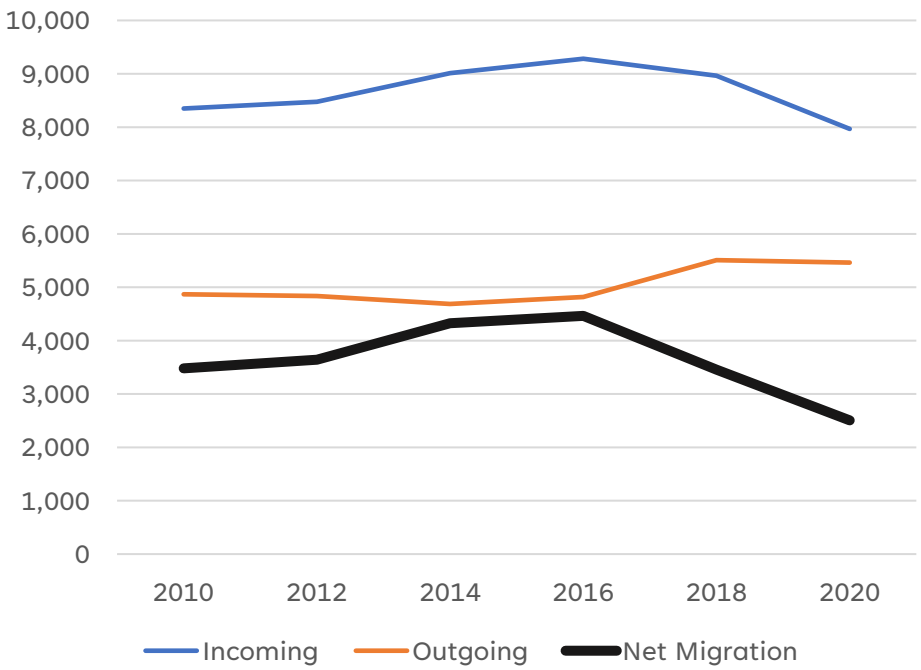
This dilemma is reflected in signs that the penetration of the out-of-state market by Oregon institutions may be softening. Oregon has historically been a net importer of students—its institutions attract more first-time students than they lose to other states. But since 2016, the net migration numbers have dropped by nearly 2,000 first-time students (Figure 34). This is due both to fewer students coming to Oregon from other states and also to larger numbers of Oregon students leaving for out-of-state institutions.

Figure 33. Projected Percent Change in High School Graduates by State, 2020-2037



Source: Western Interstate Commission for Higher Education (2020), *Knocking at the College Door* (10th Edition).

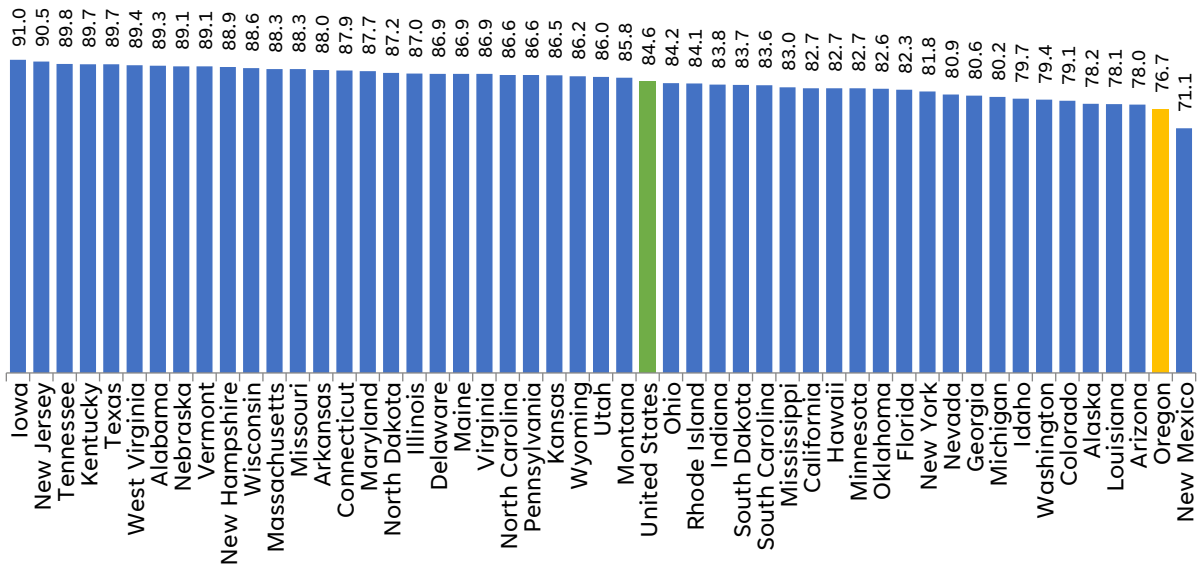
Figure 34. Oregon Net Migration of Postsecondary Enrollments, 2010-2020



Source: NCES IPEDS.

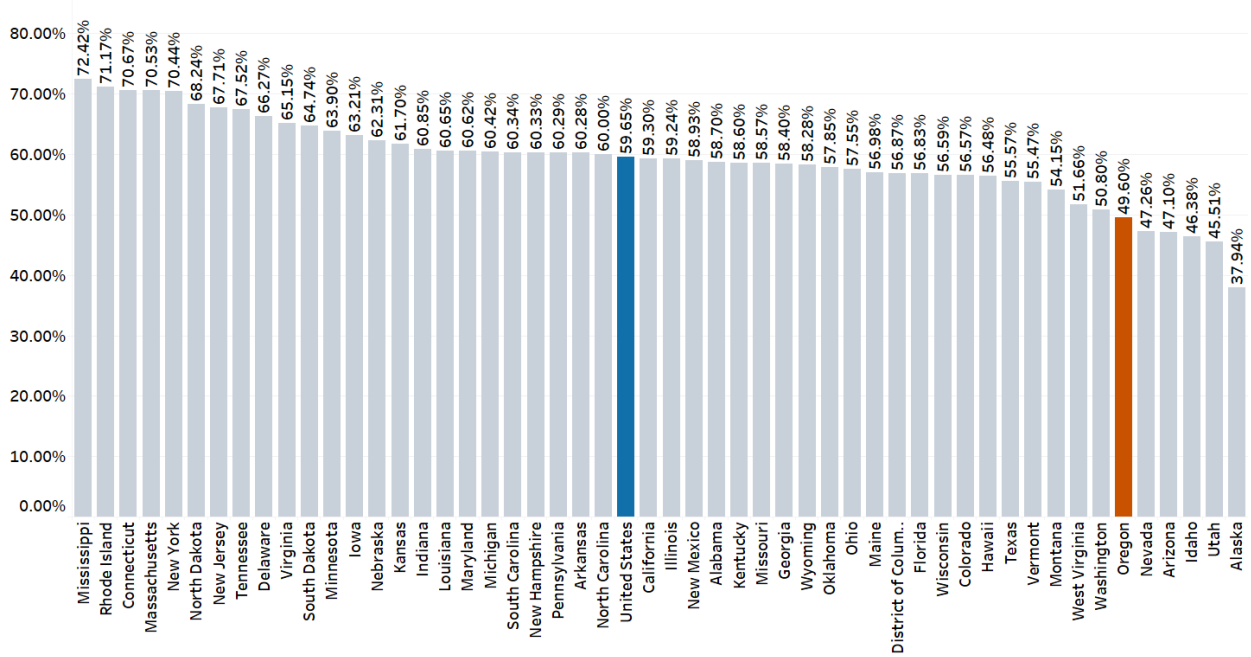
Oregon's education pipeline is also leaky at every transition point (Figures 35-38). It ranks among the lowest in the country in the proportion of ninth graders who graduate on-time from high school and in the number of recent high school graduates who go directly to college. Perhaps as a result of these leaks, Oregon performs much better at enrolling adults in postsecondary education; its rate hovers close to the national average (Figure 39).

Figure 35. Percent of Ninth Graders Who Graduate From High School Four Years Later, 2018



Source: U.S. Department of Education, Office of Elementary and Secondary Education, Consolidated State Performance Report. See Digest of Education Statistics 2018, table 219.46. Western Interstate Commission for Higher Education, Knocking at the College Door: Projections of High School Graduates; NCES IPEDS.

Figure 36. Percent of High School Graduates Going Directly to College, 2018



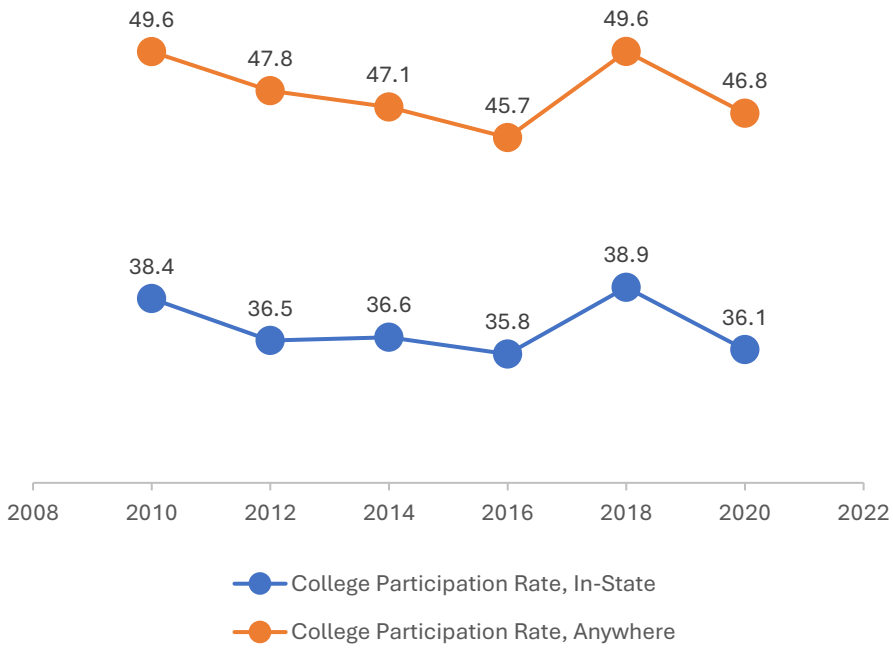
Note: Out migrants to foreign countries cannot be accounted for.

Sources: Western Interstate Commission for Higher Education, *Knocking at the College Door: Projections of High School Graduates*, 2020. https://knocking.wiche.edu/data/knocking-10th-data/ High School graduates from previous year (2017-18). NCES IPEDS. Fall 2018 ef2018c Final Release Data Files.

Additionally, college participation rates vary considerably across the state among Oregonians 18-44 based on their county of origin. The starkest difference is between counties on the eastern half of the state and those on the western side, with participation rates being considerably lower in the East. This is partially reflective of where the institutions, and the state population, is concentrated. But it also mirrors the variation in educational attainment and income. West of the Cascades, college participation rates do not show quite the same variation as the educational attainment rates in the southern part of the I-5 corridor. But there are also relatively lower participation rates in some of the counties along the coast and in Multnomah County, at least relative to the highest rates in the counties surrounding Portland and in the Willamette Valley.

The group of counties with the smallest share of residents attending an Oregon college or university overlap considerably with the list of those that are not part of a community college district. This is not true in every case, but Gillam, Wheeler, Grant, Wallowa, Baker, Harney and Lake counties have relatively lower college participation rates compared to other counties and are also not part of a community college district. Distance is also a barrier for residents of these counties to enroll in face-to-face programs.

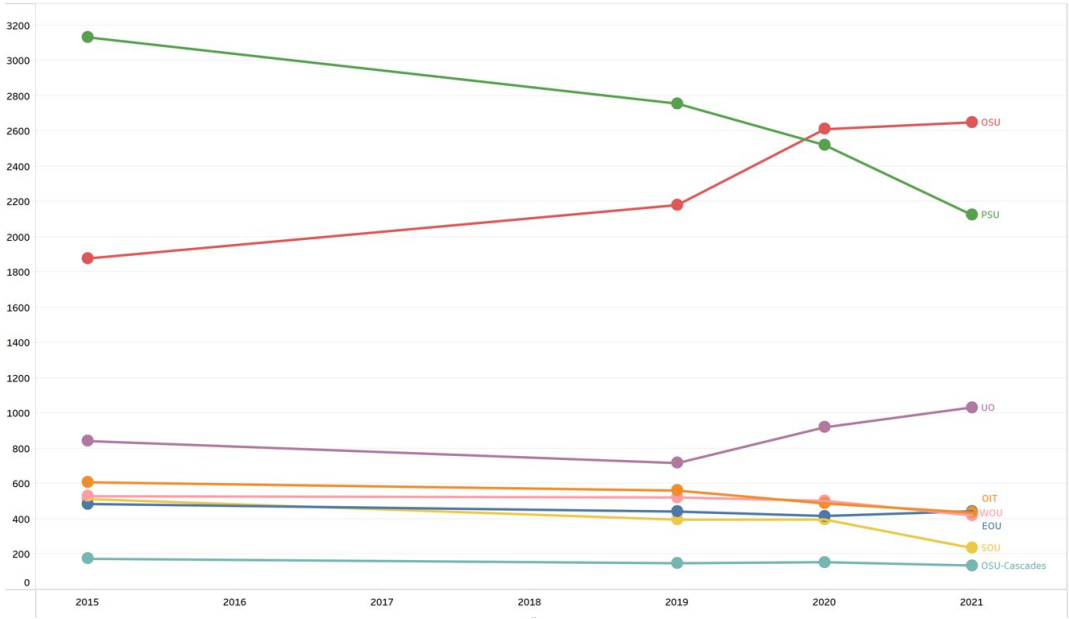
Figure 37. College Participation Rates of Recent High School Graduates by Year



Sources: WICHE *Knocking at the College Door*, 2020. NCES, IPEDS Fall Residency and Migration Enrollment Files, 2010 through 2020.

The two most popular in-state transfer destinations for Oregon community college students are Portland State and Oregon State; the University of Oregon is a distant third. These patterns have been changing, however. In 2015, Portland State enrolled over 1,000 more transfer students than did OSU; by 2020, more community college students were transferring to OSU than PSU.

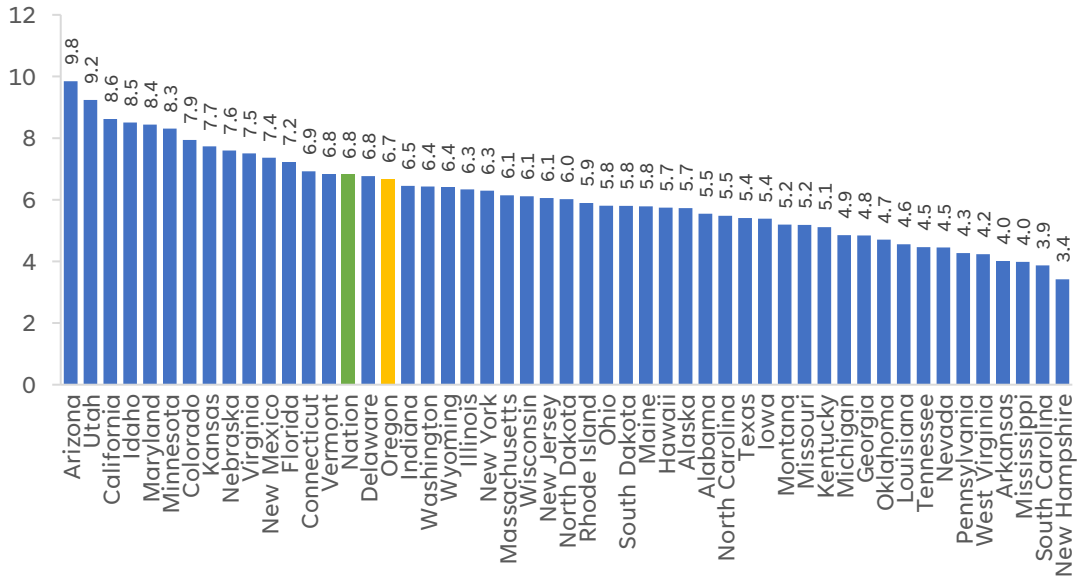
Figure 38. Transfers to Oregon Universities, by Destination



Source: HECC

Compared to the nation overall, Oregon institutions enroll a roughly equivalent percentage of the adult population aged 25-49 without a degree. As noted earlier, however, participation rates vary among Oregon counties, and adults in the eastern half of the state are much less likely to be enrolled in college compared to those in the west (Figure 40).

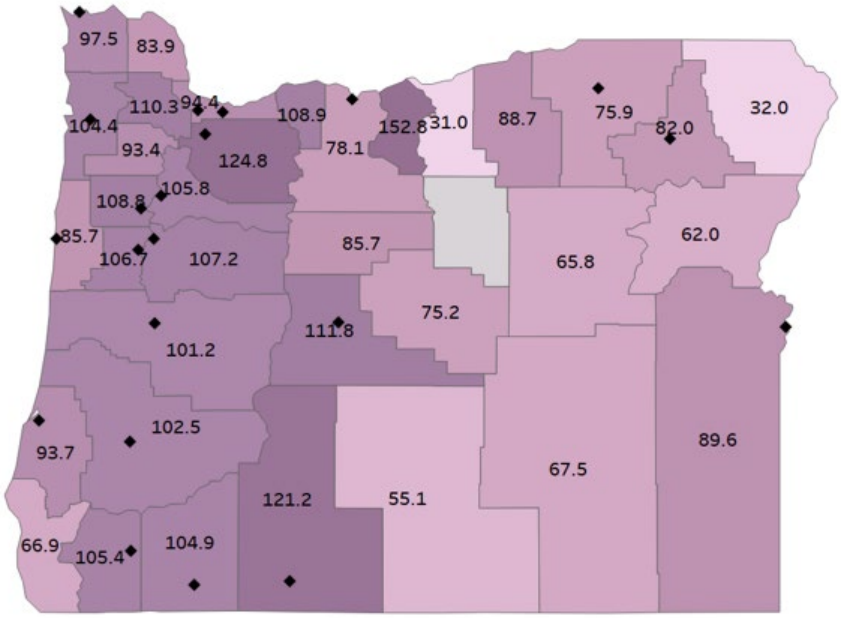
Figure 39. Undergraduate Enrollment Age 25-49 as a Percent of Population Without a Postsecondary Degree, Fall 2019



Note: Data are for the population with less than an Associate's degree.

Sources: NCES, IPEDS Fall 2019 Enrollment File; ef2019b Provisional Release Data File; U.S. Census Bureau, 2019 American Community Survey One-Year Public Use Microdata Sample.

Figure 40. Oregon Undergraduates at Public Institutions by County of Origin per 1,000 Residents Aged 18-44

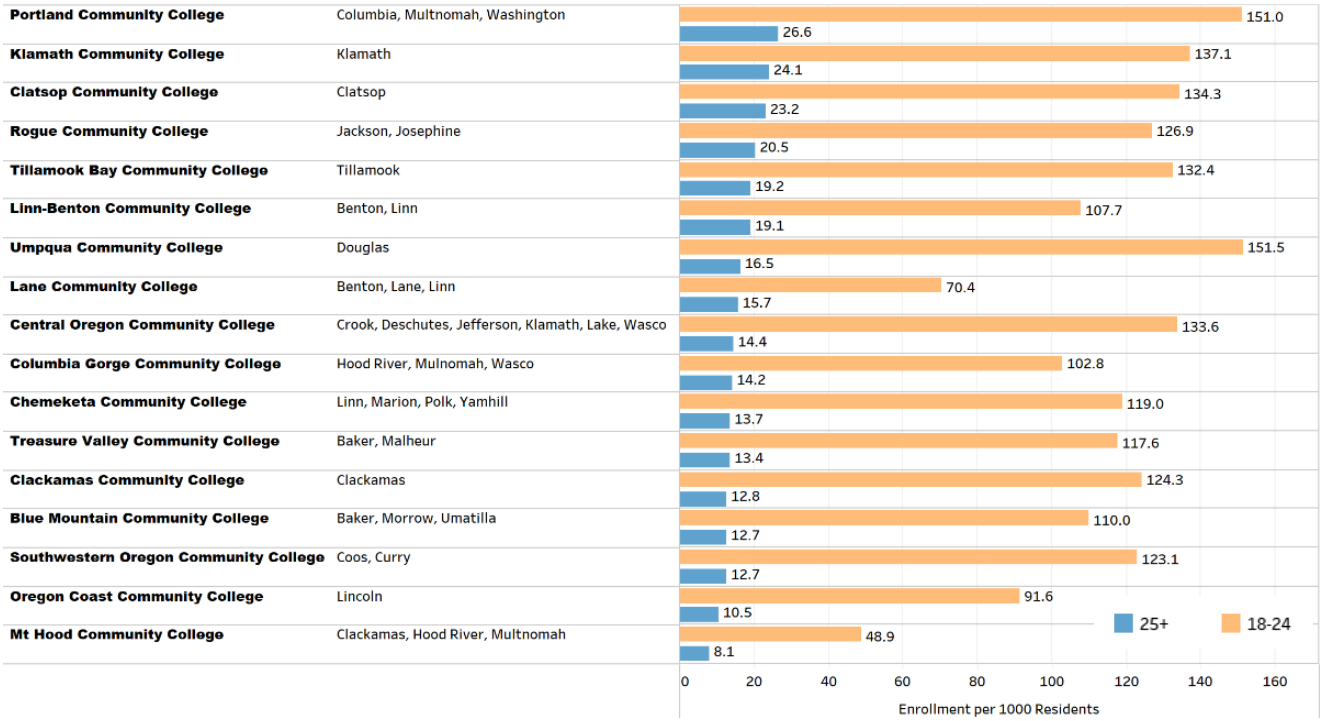


Note: Data have been suppressed to avoid cell size limitations. Diamonds indicate the location of the main campus of an Oregon public institution.

Sources: U.S. Census: 2019 Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin: April 1, 2010 to July 1, 2019 (CC-EST2019-ALLDATA); HECC.

The extent to which Oregon's community colleges enroll students from traditional (ages 18-24) and non-traditional (age 25+) age groups varies significantly by college (Figure 41). Oregon's largest community college, Portland Community College, served the largest percentage of non-traditional students in its service area in 2019, as well as the second-largest percentage of traditional-aged students. Some other institutions do a relatively better job at reaching traditional-aged students (e.g., Umpqua) or non-traditional-aged students (e.g., Klamath) in their regions. Worth noting is that some of the variation is undoubtedly due to overlapping geographic areas that are not consistent with the college's service areas. For instance, students from Multnomah County make up a relatively large proportion of Mt. Hood's total enrollment, but many of those students have a closer option in Portland Community College and the most populated parts of that county (including the City of Portland itself) is not in Mt. Hood's service district.

Figure 41. Community College Enrollment per 1,000 Residents With Less Than an Associate's Degree, by Age and Geography, 2019



Note: Community college service district boundaries are not uniformly consistent with county borders.
Source: HECC

Given these findings, Oregon's colleges and universities face important priority questions, as does the state's policy leadership. They include:

- What does Oregon see as its relationship between itself and its public institutions?
- How is the state going to partner with Oregon's institutions to substantially boost the rates at which its high school and GED students successfully graduate and enroll in college?
- How can Oregon's universities continue to be successful at providing affordable, quality programs to residents while also attracting nonresident students to their campuses? And how can the state improve the chances that graduates will stay after graduation and contribute to the Oregon's economy?
- How can Oregon's community colleges arrest the rapid decline in enrollment among credit students? In particular, how can policymakers and community colleges ensure that those who need a postsecondary education are not facing shrinking educational opportunities at community colleges, especially underserved groups who make up a growing proportion of the state population?
- How can community colleges better meet the needs of adult, part-time students by serving more of them and preparing them for a changing economy?

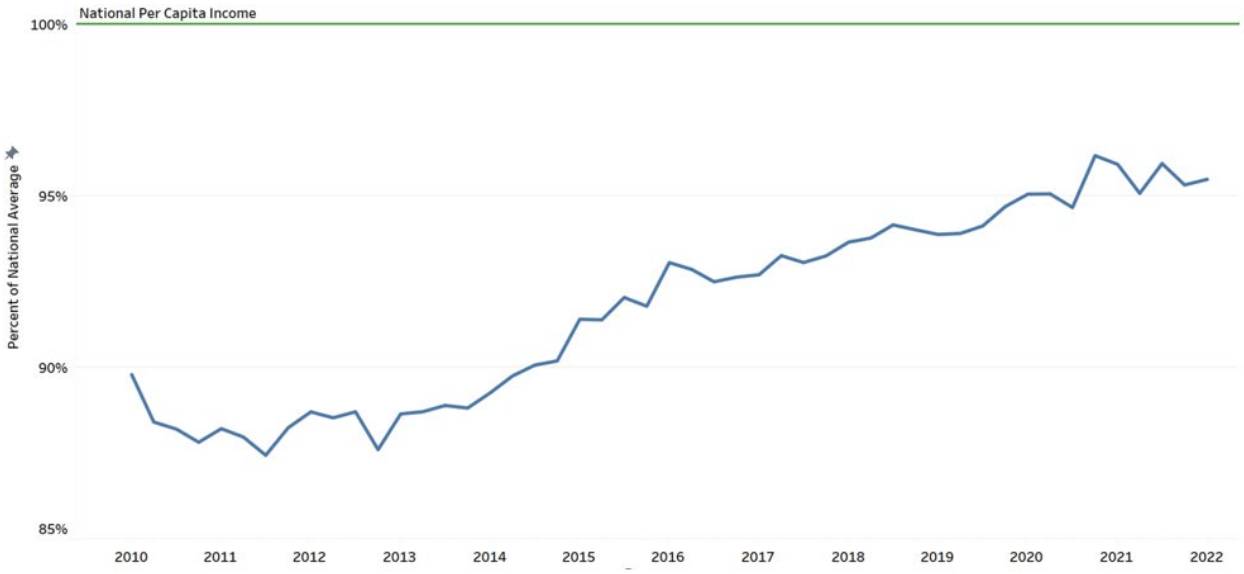
- Is there a shared understanding among institutions and with the state's policy leadership about how projected enrollment demand will be accommodated and by which institutions? Should there be?

2. Can the state's various funding models for higher education be structured and administered to maximize the return on investment for the state and contribute to advancement of higher education's core principles and missions?

In the four-year sector, HECC uses a funding model that in recent years has elevated the influence of performance funding on the determination of the institutional allocation. In the two-year sector, the model has been more traditionally reliant on enrollment, but HECC intends to review and possibly revise the model in the coming months. Based on research and analysis of state funding formulas, NCHEMS has found that most states do not use a formula to fund public institutions; rather, they just roll over the prior year's "base" funding levels, adding or subtracting some amount either in a rough proportion to that base or according to specific institutional requests and appropriators' priorities. A well-designed formula offers a state a much more rational and strategic approach to allocating scarce resources than a base plus approach does, though the design and implementation of the formula needs to find an appropriate balance between recognizing institutional costs, incentivizing efficient operations, and aligning with state goals. Recent work NCHEMS has completed in Virginia offers a potentially useful path forward, with appropriate adaptations to meet the specifics of Oregon's context, especially as the state reviews the community college funding formula. This report describes the conceptual framework being used in Virginia's redesign of their funding model beginning on page 27, with the full diagram of the framework depicted in Figure 7.

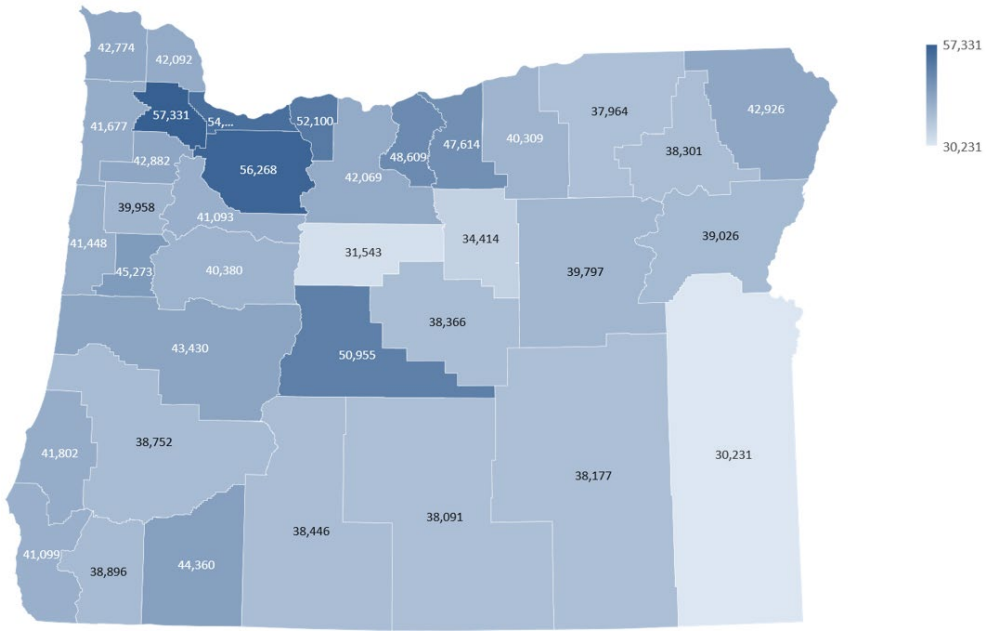
Oregon is a relatively poor state; its per capita income has lagged the national average for at least as far back as 2000 (Figure 42). The variation in income levels across the state is also substantial, with lower levels concentrated in the eastern part of the state and along the southern border, while the wealthiest counties (other than Deschutes) ring the Portland area (Figure 43). Similarly, with a few exceptions, poverty levels are highest in the east and south (Figure 44). But even some of the counties with relatively higher per capita income levels are places where a sizeable part of their population is living in poverty, including Lane, Jackson, and Benton counties—counties where three of the state's universities are located (plus Klamath County, which has a lower per capita income level). These indicators of wealth have implications for affordability—policymakers and other state actors may recognize that pricing decisions should reflect local conditions, especially for institutions that draw the majority of their students from surrounding counties. The contrast of high median incomes alongside high poverty rates in counties where state institutions are located raises questions about how the universities can serve as stewards of place—how can they mitigate this discrepancy, especially by ensuring local students are on a trajectory to a successful postsecondary pathway?

Figure 42. Oregon Per Capita Income as a Percent of the National Average



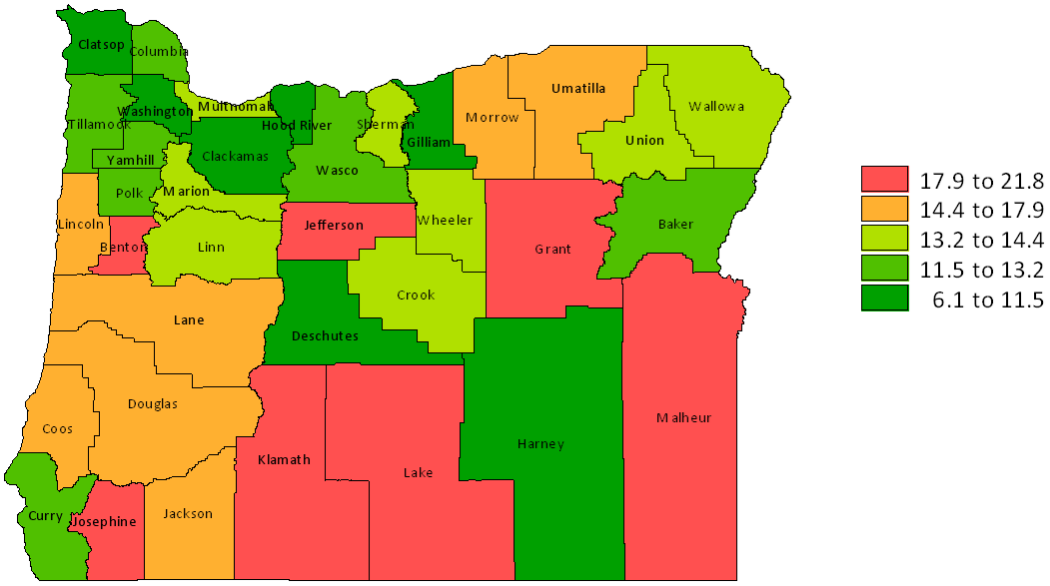
Source: Bureau of Economic Analysis.

Figure 43. Per Capita Income by Oregon County, 2017



Source: Bureau of Economic Analysis.

Figure 44. Average Annual Percent Living in Poverty, 2015-2019



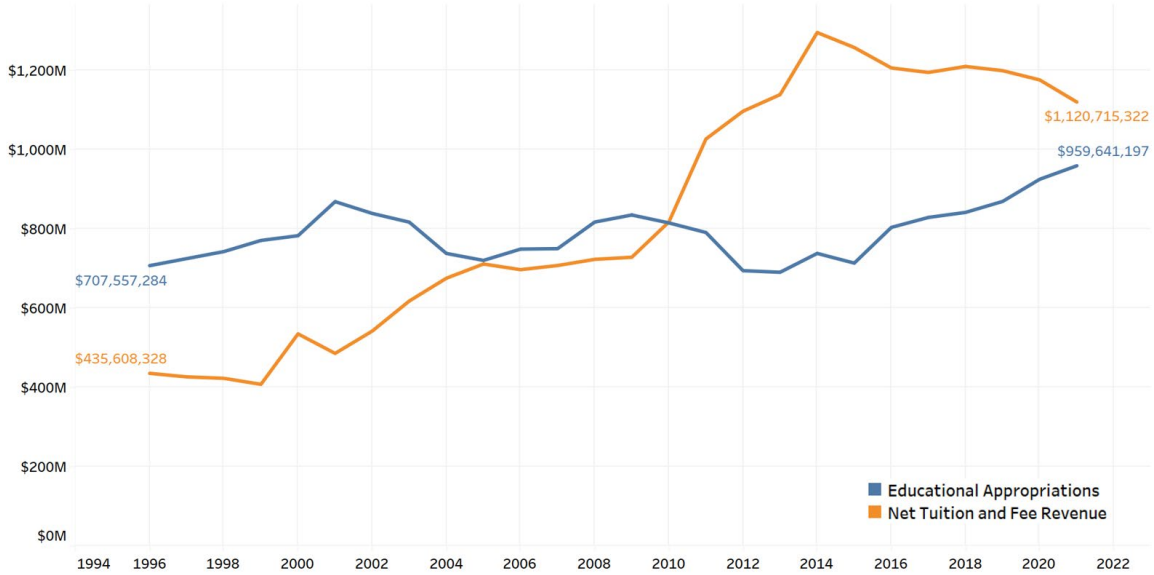
Source: U.S. Census Bureau, 2015-19 American Community Survey (ACS) 5-Year Public Use Microdata Sample (PUMS).

In comparison to other states, in FY 2021 Oregon's public institutions had more funding on a per student basis (at $18,477) than the nation's institutions as a whole did ($16,050) (Figure 45). State funding lagged the national average, however, and Oregon institutions more than made up the difference in tuition revenue. A very different picture emerges when looking at differences by sector: funding from the state to the universities was just two-thirds of the national average level, while Oregon's universities collected more than 50 percent more revenue from students than public institutions nationally did (Figure 46). Among community colleges, tuition revenue still outpaced the national by over $800 per student even though public funding from state and local sources for credit-bearing instruction also exceeded the national average by 22 percent.[16] Local funding accounts for roughly 30 percent of total educational revenue in Oregon, an amount similar to the nation as a whole, but a larger proportion than all but 12 states (and Alaska, but Alaska's unusual structure under which the two-year mission, apart from a single locally controlled institution, is almost fully enveloped within the four-year institutions in that state, which distorts this picture) (Figure 47).

Oregon has consistently expected students to bear more of the cost burden of public higher education than the nation as a whole, and a substantially larger share than its fellow Western states (Figures 48-51). The student share spiked in Oregon during the Great Recession but remained at over 50 percent overall in FY 2020. There is an argument for ensuring that tuition rates for in-state students are stabilized or reduced and the state backfill any lost revenues to the institutions.

[16] SHEF data for educational appropriations excludes funding and FTE enrollments for non-credit activity.

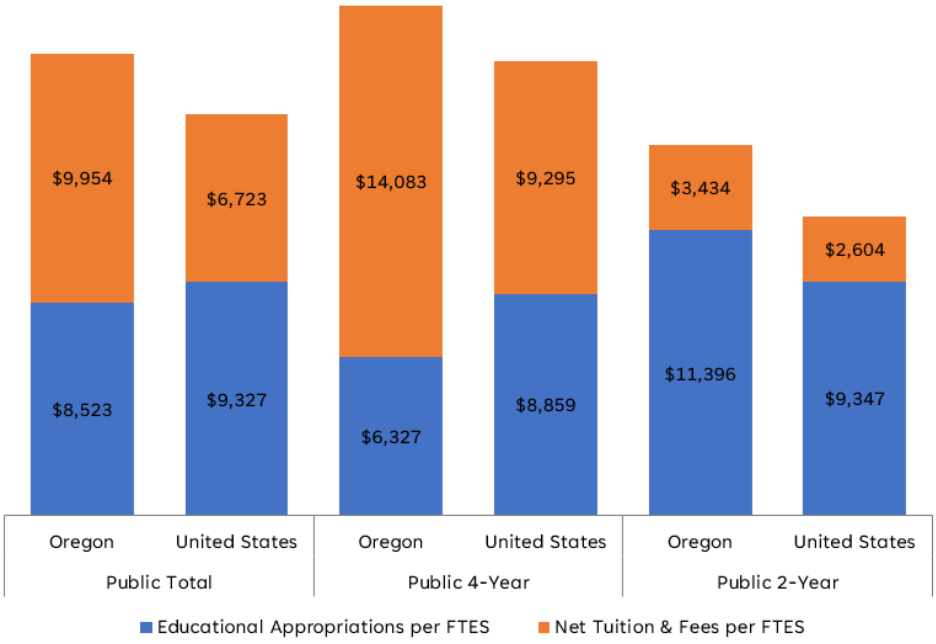
Figure 45. Educational Appropriations and Net Tuition Revenue for Oregon



Note: Educational appropriations and FTE exclude non-credit enrollments, but do include state financial aid, including aid awarded to students attending Oregon private, non-profit institutions. Data are adjusted for inflation using HECA.

Source: SHEEO SHEF.

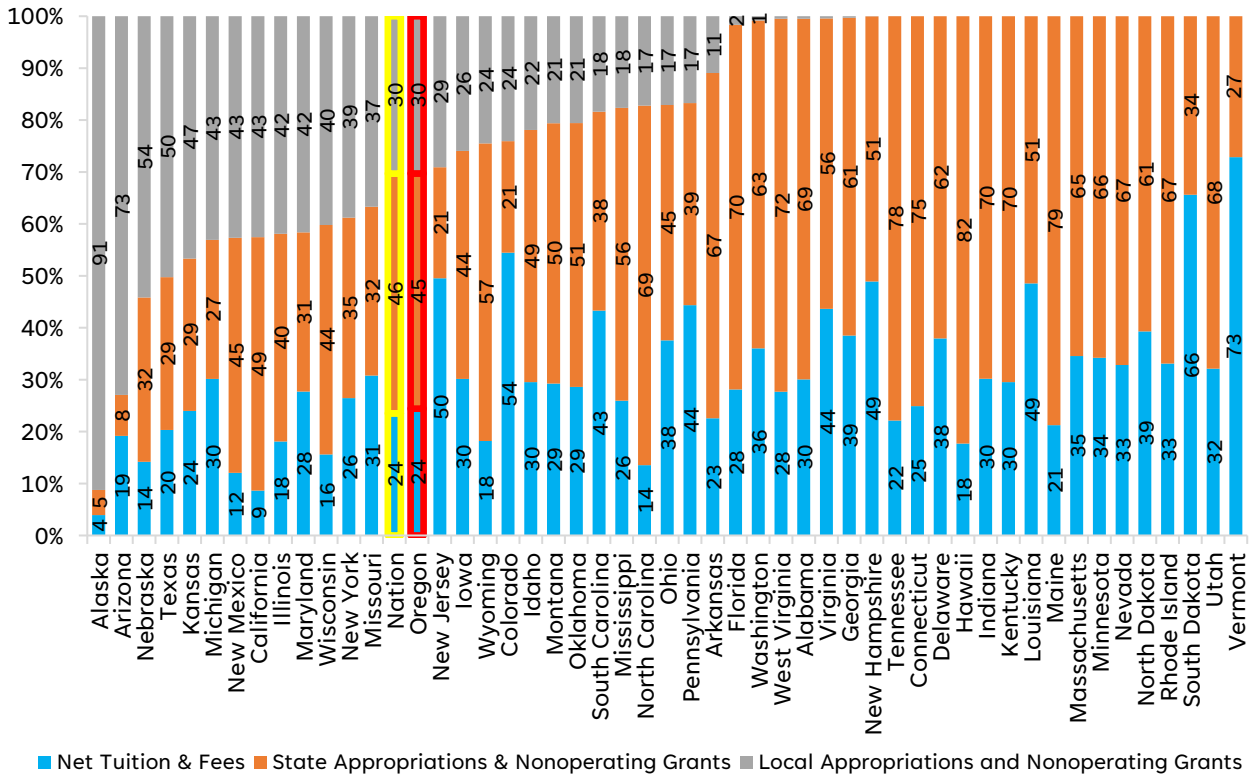
Figure 46. Educational Appropriations and Net Tuition Revenue by Sector, FY 2021



Note: Educational appropriations and FTE exclude non-credit enrollments.

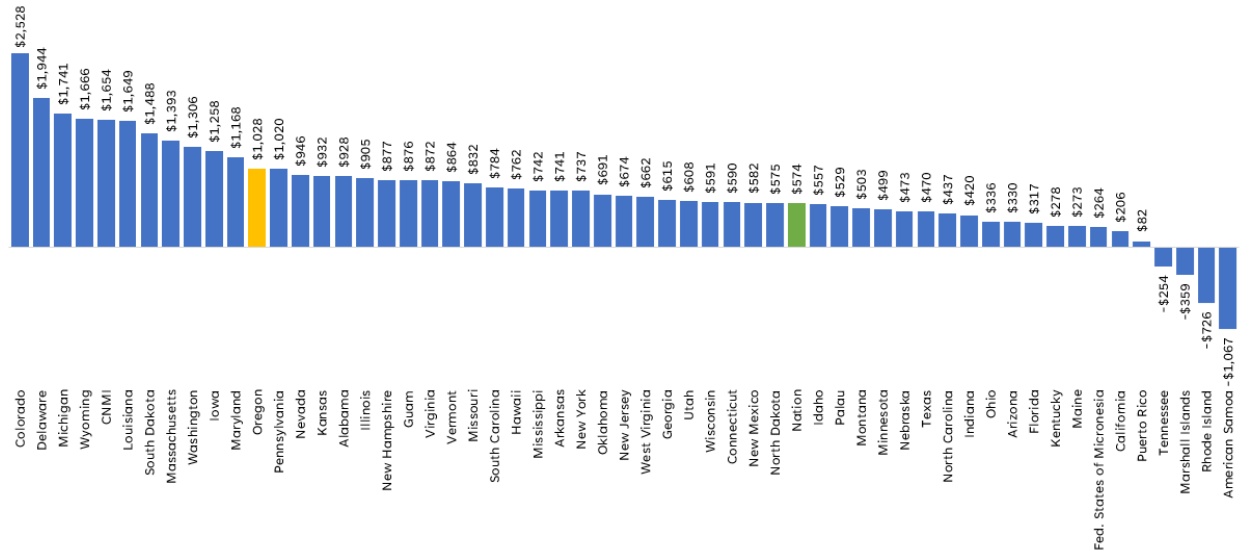
Source: SHEEO SHEF.

Figure 47. Public Two-Year Institutions Percent of Total Funding by Revenue Source, FY2020



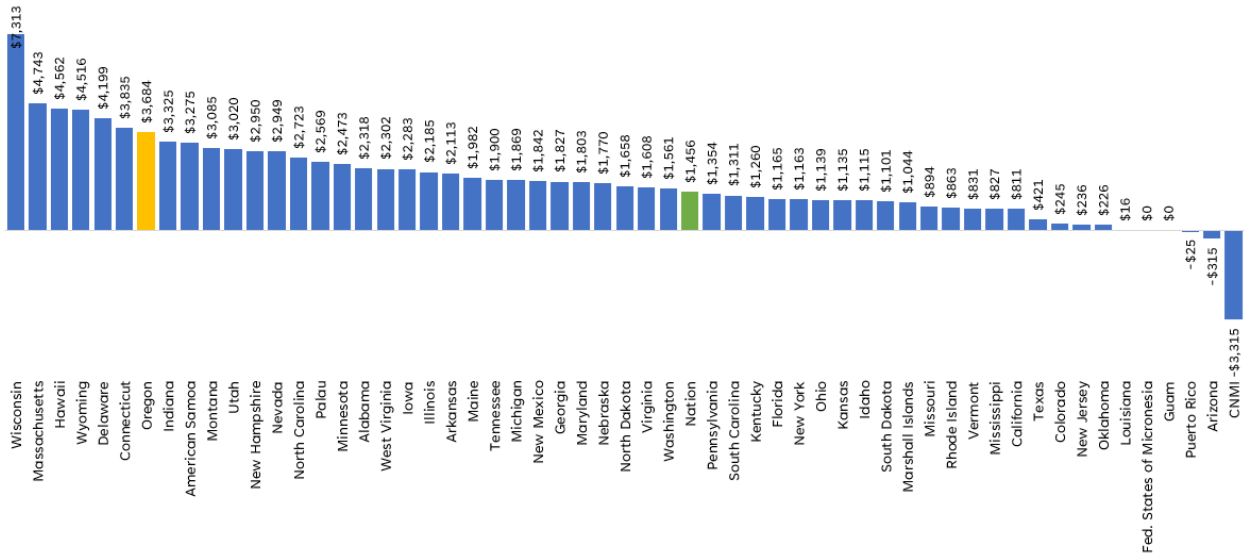
Source: NCES IPEDS.

Figure 48. Change in Net Tuition Revenue per FTE, Public Two-Year Institutions, FY2010 to FY2020



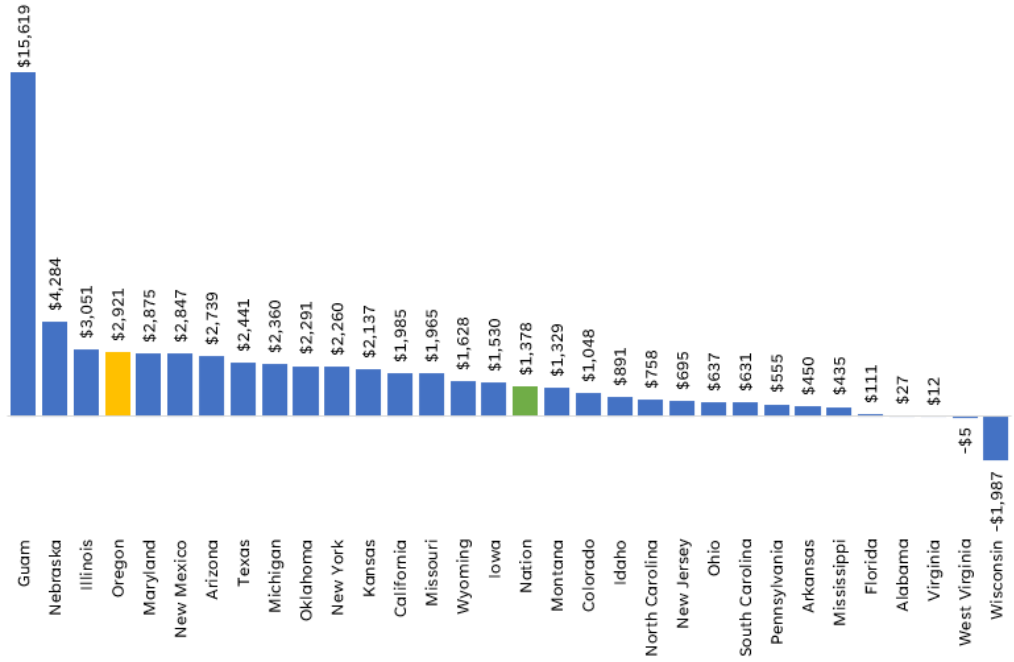
Source: NCES IPEDS

Figure 49. Change in State Appropriations per FTE, Public Two-Year Institutions, FY2010 to FY2020



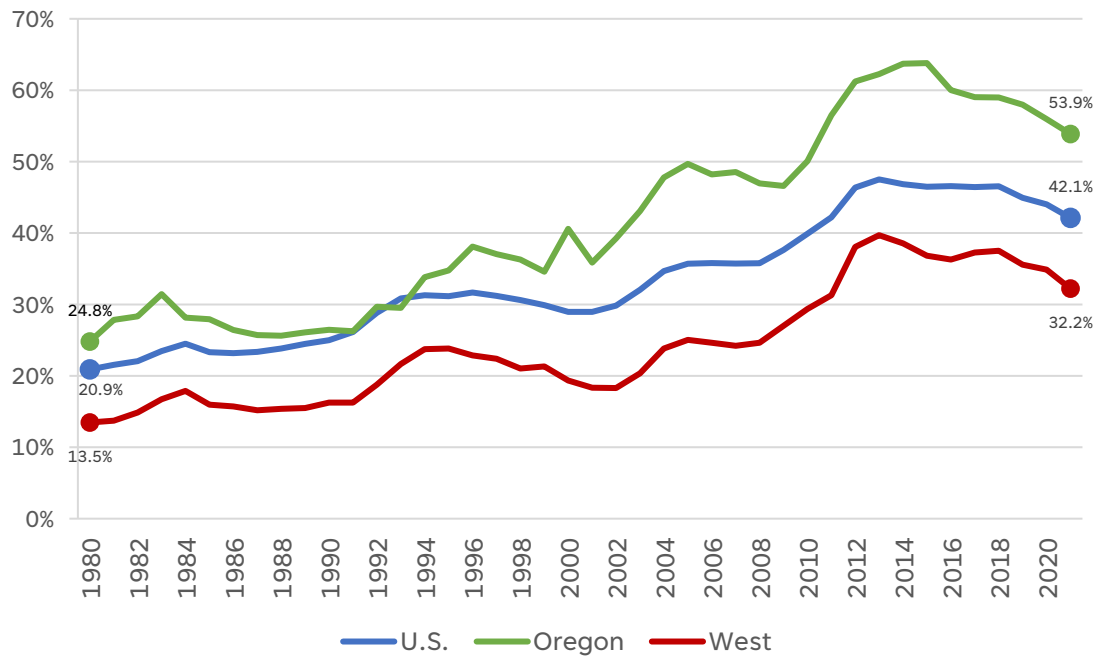
Source: NCES IPEDS

Figure 50. Change in Local Appropriations per FTE, Public Two-Year Institutions, FY2010 to FY2020



Source: NCES IPEDS

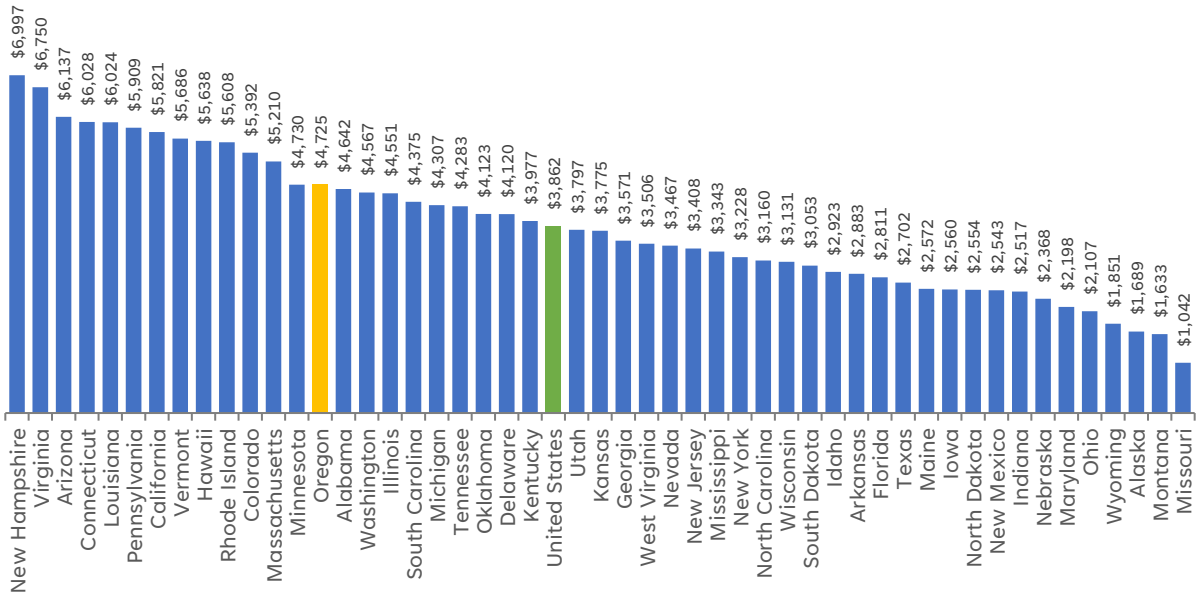
Figure 51. Net Tuition Revenue as a Percent of Total Educational Revenue, 1980-2021



Source: SHEEO SHEF.

Published tuition prices across all sectors outpaced growth nationally and in the West, even though Oregon's prices generally started out higher than other states' (Figures 52-54). In 2008, published prices at Oregon's public research universities were roughly equivalent to the average nationally. But between then and 2018, they by $4,725 (after adjusting for inflation), well above the national average growth. Increases in published tuition prices in the public comprehensive sector and the public two-year sector also substantially outpaced the national average, but in both of those sectors the prices in 2008 started out significantly higher than the corresponding national averages.

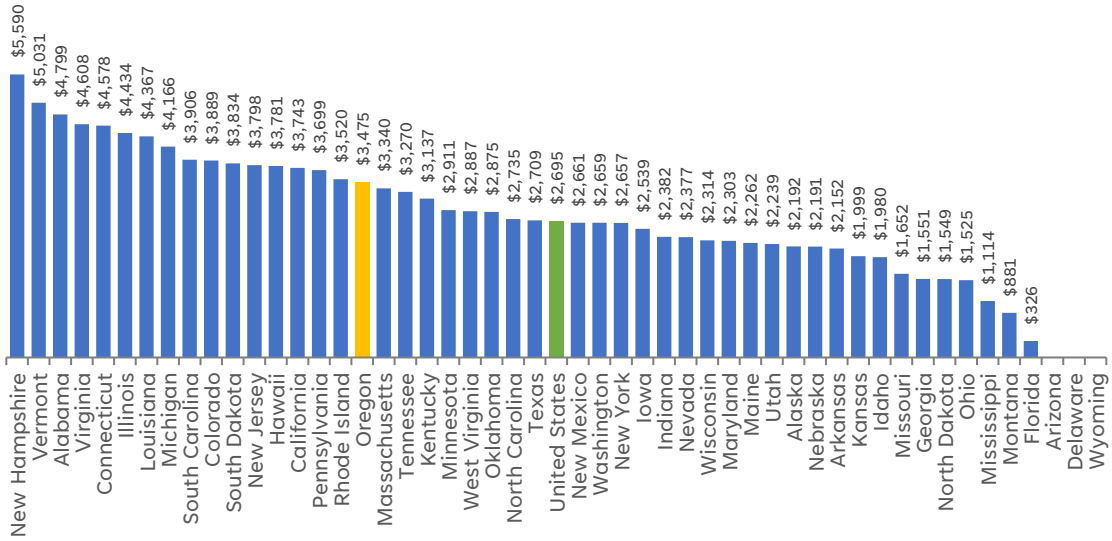
Figure 52. Change in Published In-State Tuition and Fees at Public Research Universities, 2008-2018



Note: Data are adjusted for inflation and are the enrollment-weighted average facing first-time full-time undergraduate students.

Source: NCES IPEDS.

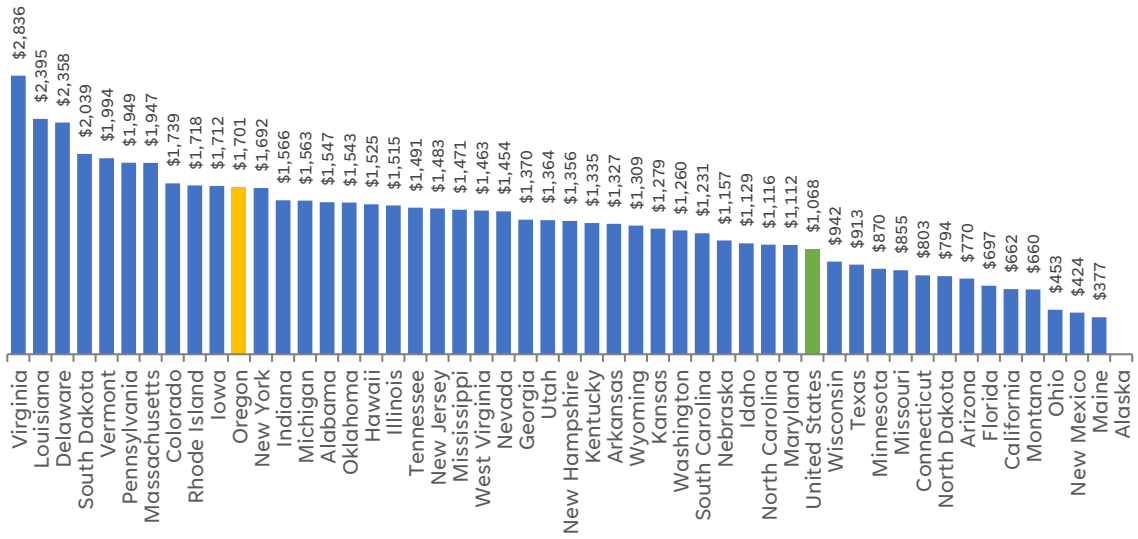
Figure 53. Change in Published In-State Tuition and Fees at Public Comprehensive Universities, 2008-2018



Note: Data are adjusted for inflation and are the enrollment-weighted average facing first-time full-time undergraduate students.

Source: NCES IPEDS.

Figure 54. Change in Published In-District Tuition and Fees at Public Two-Year Institutions, 2008-2018

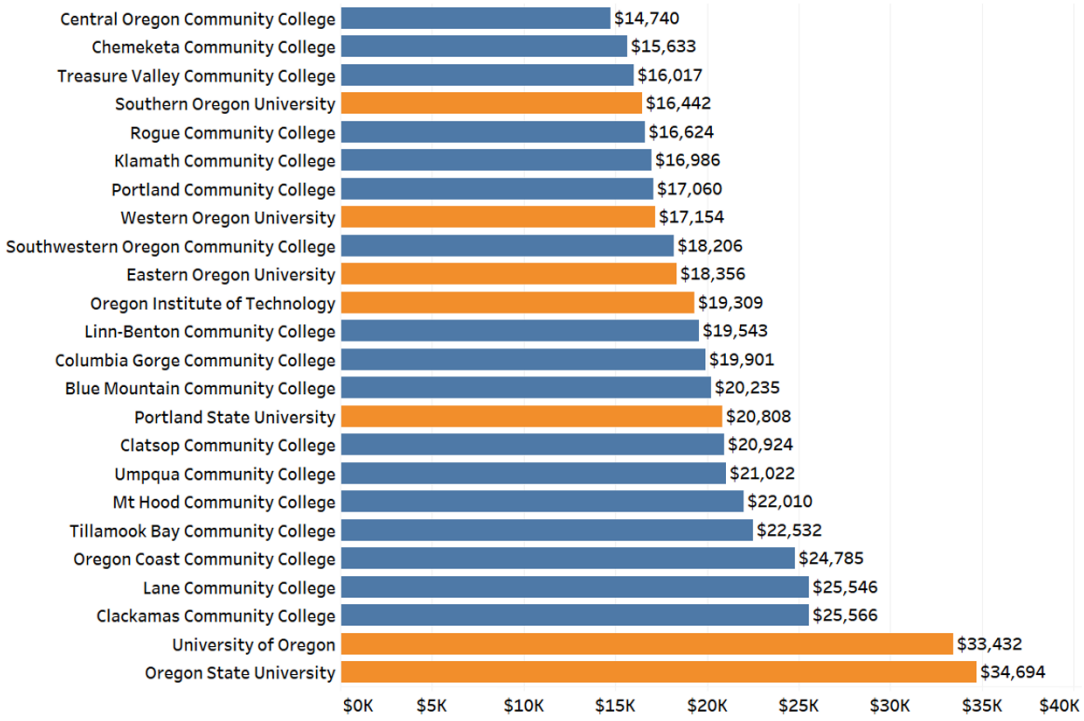


Note: Data are adjusted for inflation and are the enrollment-weighted average facing first-time full-time undergraduate students.

Source: NCES IPEDS.

Education and general expenditures per FTE vary among Oregon institutions, and are significantly higher at the University of Oregon and Oregon State than they are at the state's other four-year and two-year institutions (Figure 55). These additional expenditures reflect their broader mission to conduct research, run extension and other public service activities, and serve a statewide, national, and international audience.

Figure 55. Education and General Expenditures per FTE, FY2020

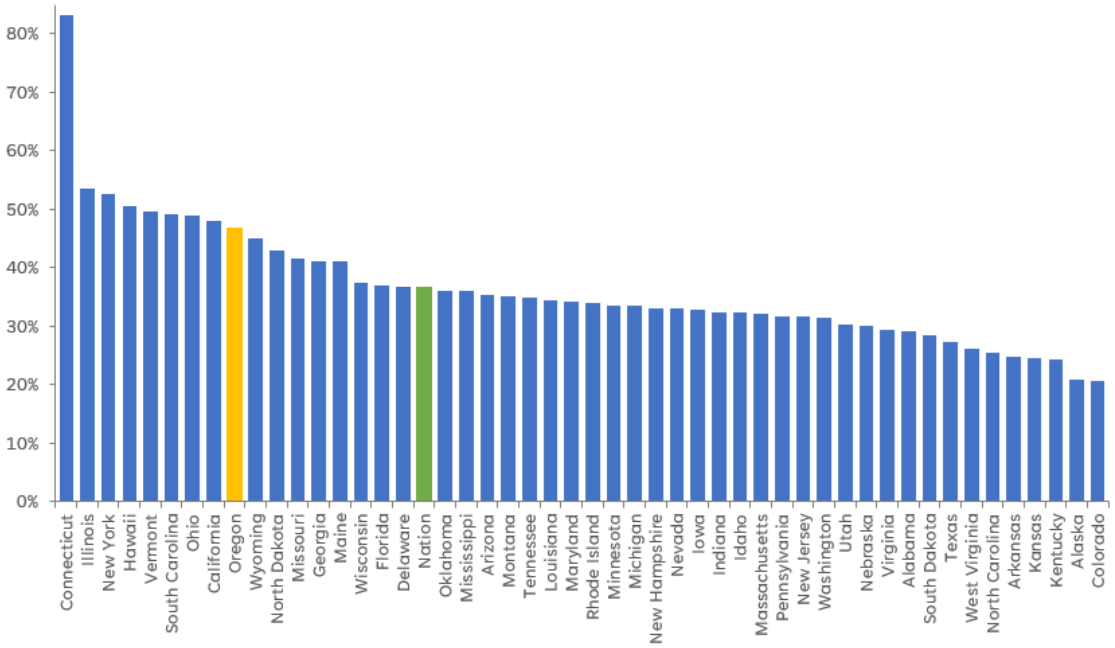


Note: Education and general expenditures include expenditures on instruction, research, public service, academic support, student services, and institutional support.

Source: NCES IPEDS

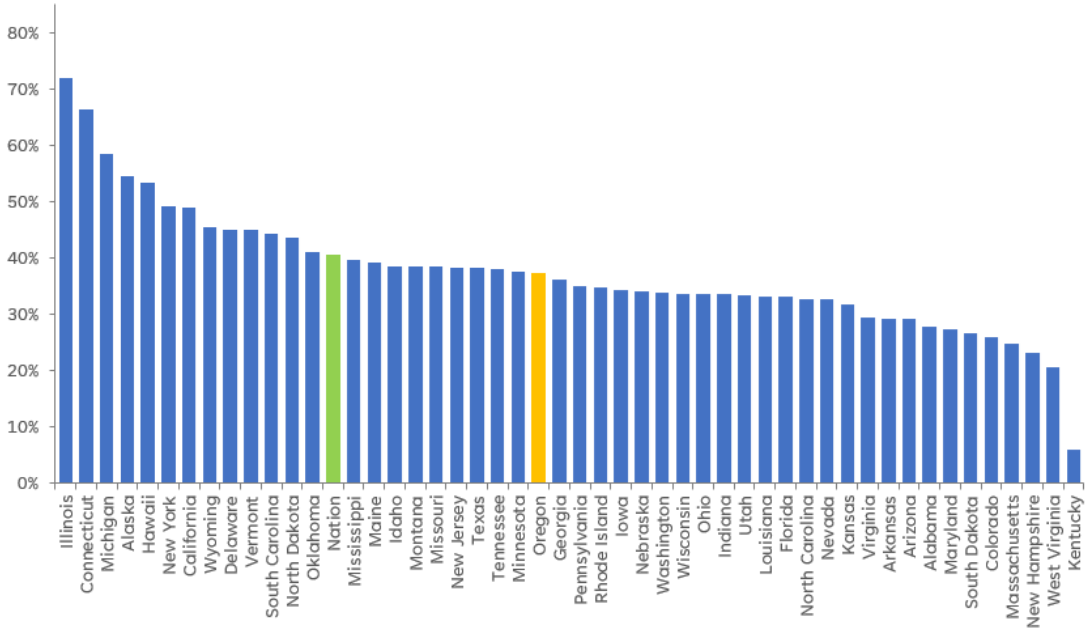
Oregon's four-year institutions spend more on employee benefits, as a percentage of salaries, than do other states and the nation overall (Figure 56). In an industry so reliant on personnel, employee compensation represents the large majority of the costs of the enterprise as a whole; these—particularly benefits costs—are not costs that are within institutions' control. Yet these costs go a long way in determining affordability, and they also impose limits on staffing to serve students most effectively. The state's two-year institutions, by contrast, spend less than the national average on benefits as a percentage of salaries (Figure 57). Although the difference is not substantial in this sector, these data deserve scrutiny, particularly if these institutions are turning to faculty and staff who are ineligible for benefits as a way to control costs, potentially at the expense of educational quality.

Figure 56. Expenditures on Benefits as a Percent of Expenditures on Salaries and Wages, Public Four-Year Institutions, FY2020



Source: NCES IPEDS

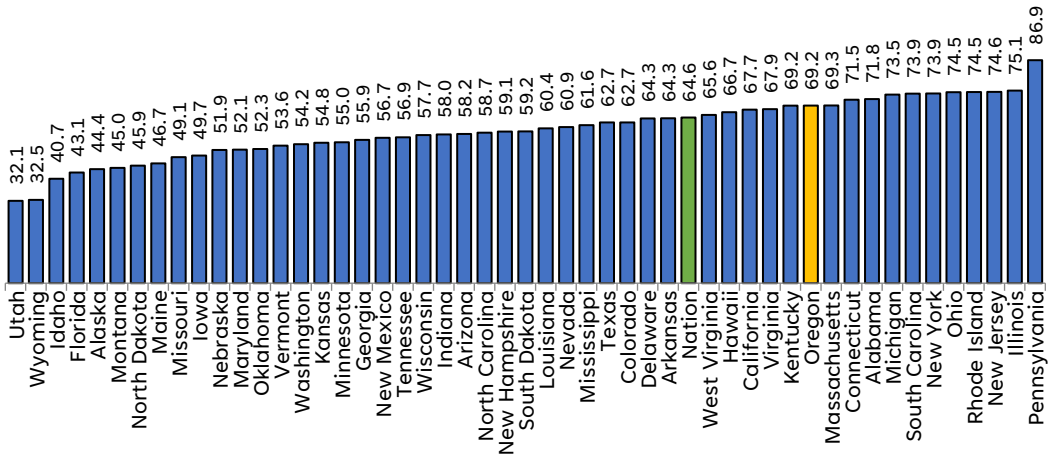
Figure 57. Expenditures on Benefits as a Percent of Expenditures on Salaries and Wages, Public Two-Year Institutions, FY2020



Note: New Mexico is not displayed because seven of 20 institutions reported negative benefits.
Source: NCES IPEDS

With Oregon's dependence on tuition revenue to fund operational costs, it is critical to keep track of affordability metrics that provide information about the actual out-of-pocket expenses students face in attending college (Figures 58-61). These are important to review for different income levels, in particular. Not surprisingly given the preceding data, net prices for Oregon institutions —the amount of money resident students are expected to pay to cover full-time cost of attendance after all grant aid is accounted for—are high, relative to other states.[17]

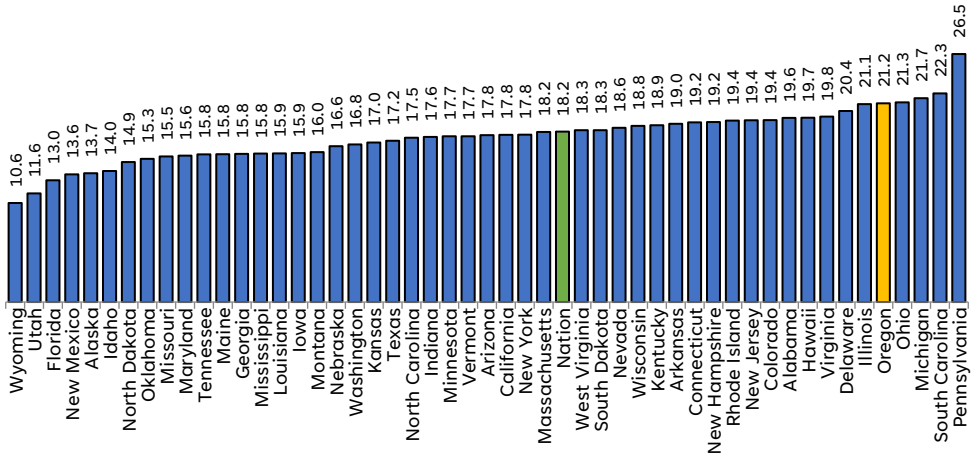
Figure 58. Net Price as a Percent of Lowest Quintile Family Income, Public Four-Year Institutions, FY 2018



Note: Data are for first-time, full-time undergraduates who received Title IV aid and enrolled in the fall.
Source: NCES IPEDS.

[17] State comparisons of net prices in the two-year sector are not provided since the data apply for first-time, full-time students only. These students represent only a minority of entering students at community colleges, rendering the analyses less useful.

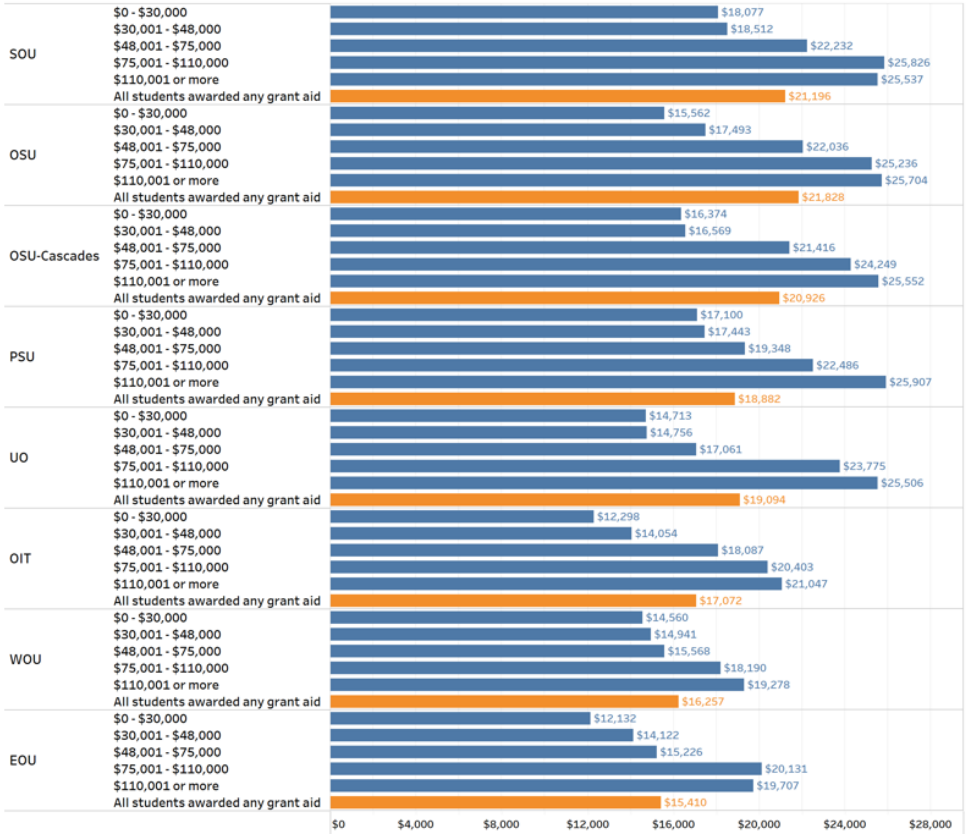
Figure 59. Net Price as a Percent of Median Family Income, Public Four-Year Institutions, FY 2018



Note: Data are for first-time, full-time undergraduates who received Title IV aid and enrolled in the fall.
Source: NCES IPEDS.

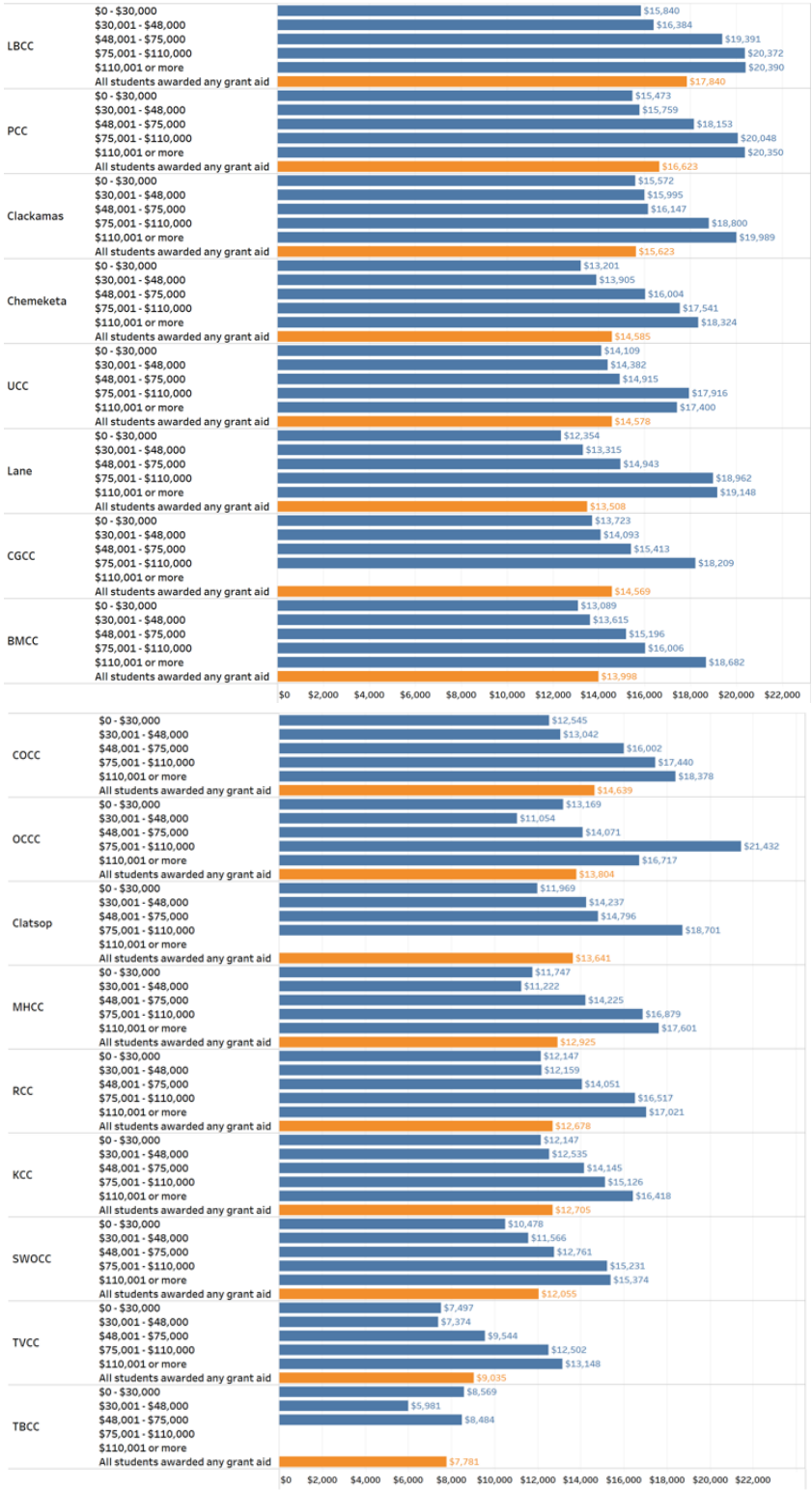
Net prices are generally higher for students from higher income brackets. However, at a number of Oregon institutions, costs for students from the lowest income bracket ($30,000), after grants and scholarships, still exceed half of their families' annual incomes.

Figure 60. Net Price by Income Level, Oregon Universities, FY 2020



Note: Data are for first-time, full-time undergraduates who received Title IV aid and enrolled in the fall.
Source: NCES IPEDS.

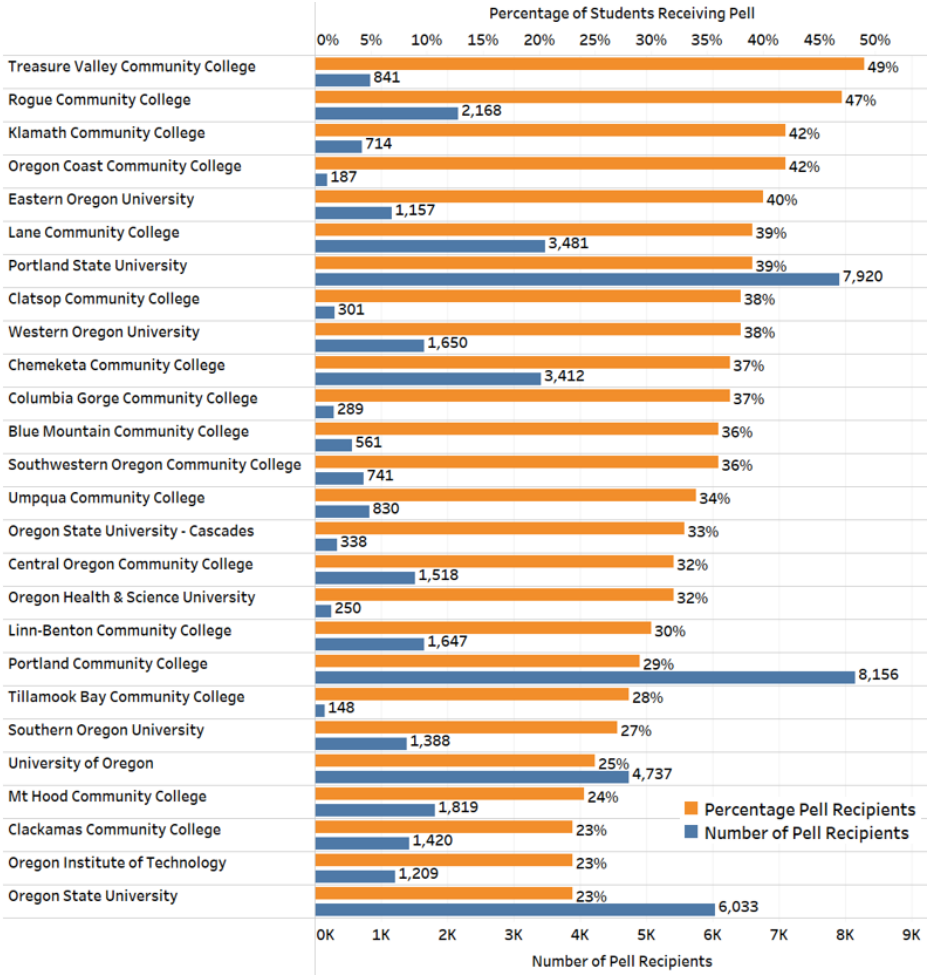
Figure 61. Net Price by Income Level, Oregon Community Colleges, FY 2020



Note: Data are for first-time, full-time undergraduates who received Title IV aid and enrolled in the fall.
Source: NCES IPEDS.

Unsurprisingly, Oregon's largest institutions also serve the largest number of Pell grant recipients, though Pell recipients do not always make up a large percentage of their overall student bodies (Figure 62). Oregon State serves the third largest number of Pell recipients, but only 23 percent of its students receive Pell, the smallest percentage of all the state's colleges and universities. Portland-area institutions serve large numbers of Pell students; the two largest groups of Pell recipients attend Portland Community College and Portland State, respectively. There is not a clear pattern of which type of institution is more likely to serve Pell students; both universities and community colleges vary in their percentages of these low-income students.

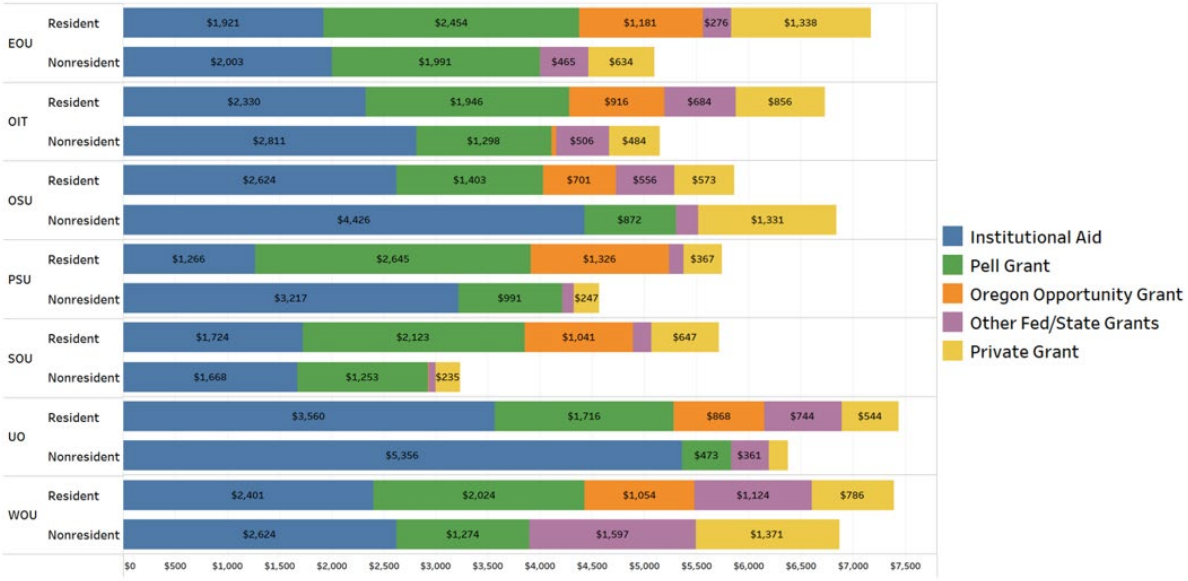
Figure 62. Number and Percent of Undergraduates Receiving Pell Grants, 2019-20



Source: NCES IPEDS.

Given these patterns of funding, Oregon universities have sought to tap the nonresident market for students who can pay a premium to attend. Among the most powerful tools to use for this purpose is institutional aid, and most Oregon universities devote more of their own aid to non-residents than to resident students on a per student basis (Figure 63). With fewer non-residents enrolled at each of the institutions, however, all but UO spent more of their own money on resident students (Figure 64).

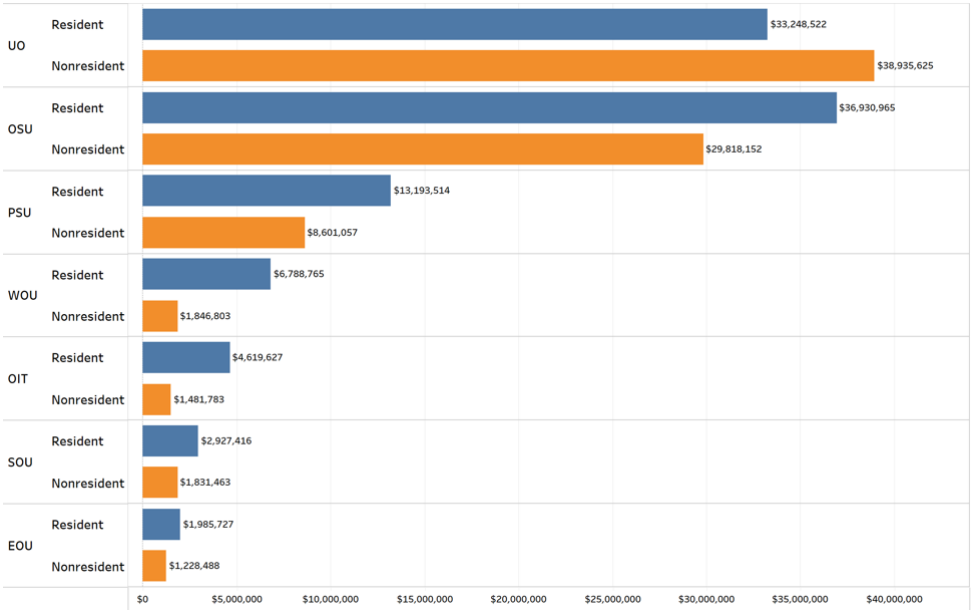
Figure 63. Grant Aid per Student by Source and Residency, FY 2021



Notes: Data are annual for full-time first-time students enrolled in Fall 2020. Some data are suppressed to avoid violated state-mandated cell-size limitations.

Source: HECC

Figure 64. Institutional Grant Aid Funding by Residency, FY 2021



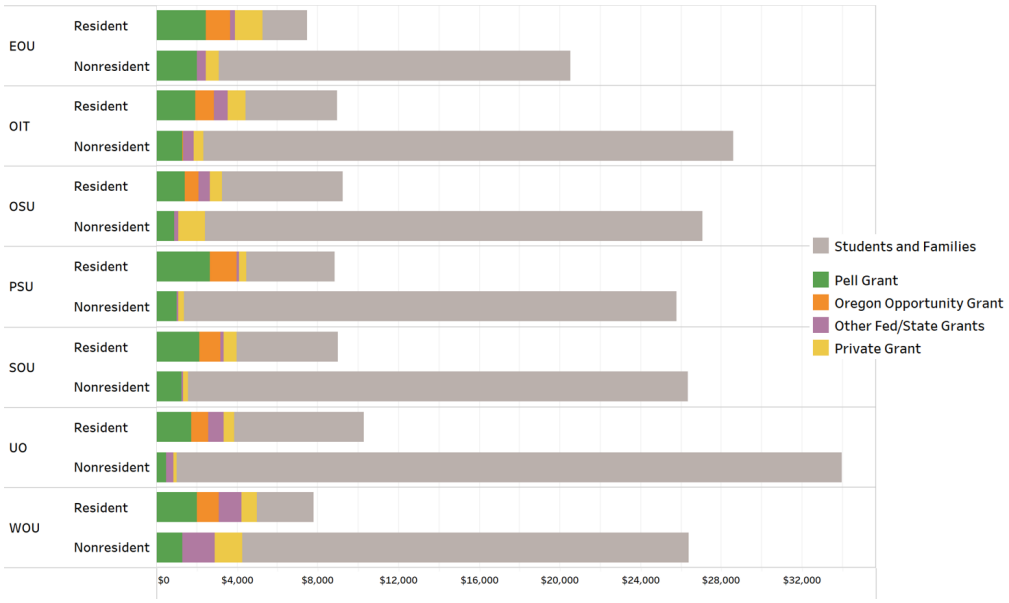
Notes: Data are annual for full-time first-time students enrolled in Fall 2020. Some data are suppressed to avoid violated state-mandated cell-size limitations.

Source: HECC

A picture of how crucial the enrollment of non-resident students is to Oregon's universities' bottom lines shows large premiums in terms of additional revenue collected from each non-resident enrolled relative to the revenue collected for each resident student (Figures 65-68).

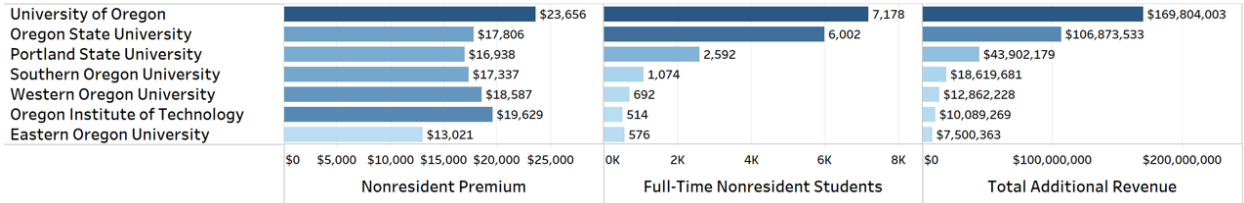
Each of Oregon's four-year institutions collected substantially more revenue for nonresidents than residents, even after excluding institutional grant aid expenditures. For example, in the University of Oregon's case, even though it maintains the largest budget for providing aid to nonresident students, the revenue it collects from nonresidents is about three times what it collects from resident students, on average. Overall, that additional funding amounted to nearly $170 million at UO, and $7.5 million at EOU, representing funding that plays a crucial role in supporting the institutional mission. Finally, these data make it evident that the use of institutional aid funding to attract non-residents has a substantial return on investment for the institutions. But they also may be paying off for the state taxpayers in helping to support resident students' enrollment, including those from low-income and underrepresented racial/ethnic backgrounds, and in providing crucial dollars that help offset the institution the below-average state funding levels already documented.

Figure 65. Tuition and Fees Revenue per Full-Time Student by Source, FY 2021



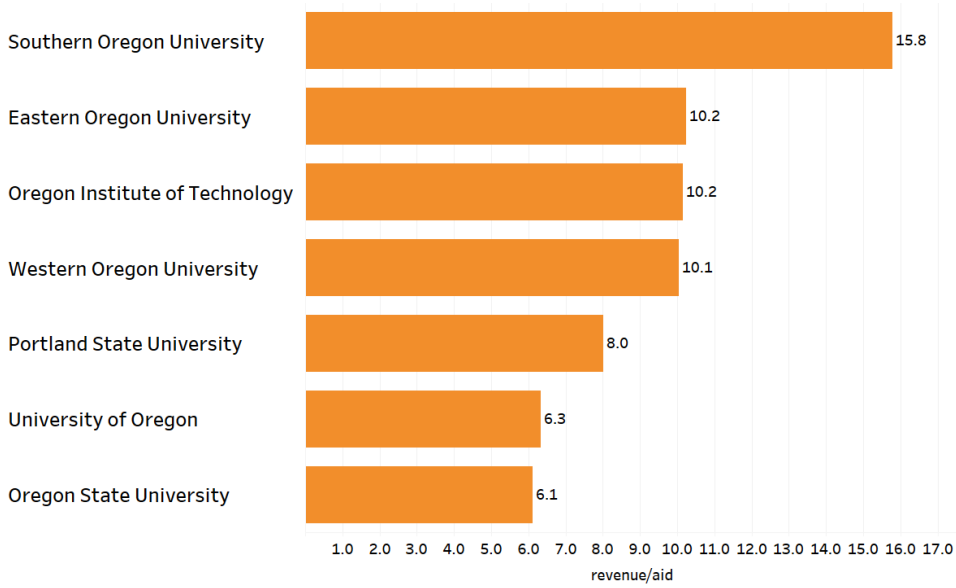
Notes: Data are annual for full-time first-time students enrolled in Fall 2020. Some data are suppressed to avoid violated state-mandated cell-size limitations. Data exclude institutional aid and revenue from student payments other than those made for tuition and fees.
Source: HECC.

Figure 66. Additional Tuition Revenue Collected from Non-Resident Students, FY 2021



Notes: Data are annual for full-time first-time students enrolled in Fall 2020. Some data are suppressed to avoid violated state-mandated cell-size limitations. These data provide the amount of additional revenue nonresidents contribute than they would have had they been resident students. The "nonresident premium" is the additional revenue generated from each nonresident student.
Source: HECC

Figure 67. Revenue Collected from Nonresident Undergraduates per Dollar Awarded in Institutional Aid, 2020-2021



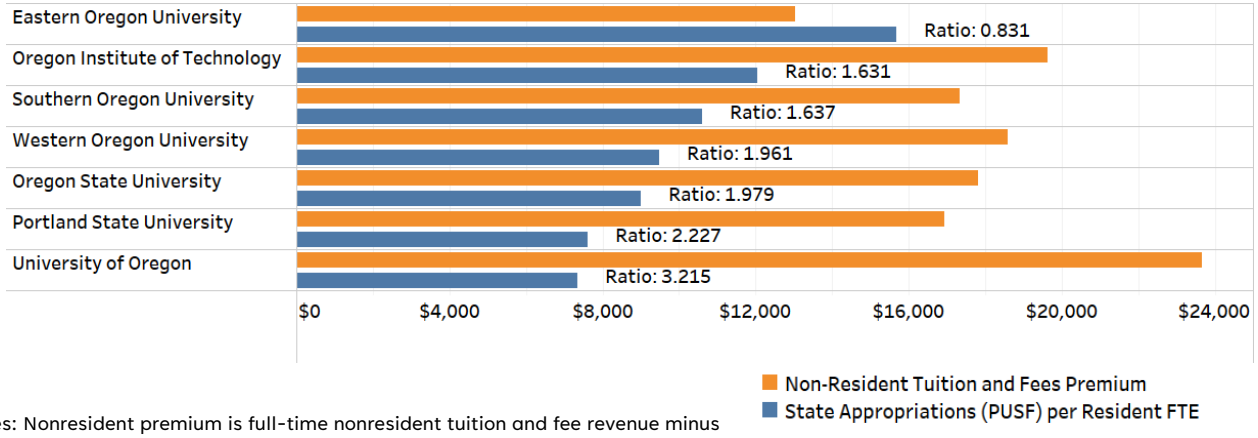
Notes: Data are tuition and fees revenue collected from nonresident undergraduates minus institutional aid dollars awarded to nonresident undergraduates and are annual for full-time students enrolled in Fall 2020. Some data are suppressed to avoid violated state-mandated cell-size limitations.
Sources: HECC and NCES IPEDS

A caution is warranted, however, in that the ability to successfully recruit non-residents is very uneven among the institutions—unevenness that is likely to grow more apparent with demographic changes ahead. These factors may be exacerbated by decisions made by the University of California to enroll many more Californians, the population targeted by Oregon institutions. Finally, these data only reflect one of the ways that recruiting (and retaining) non-residents may be costlier than recruiting Oregonians—there are sure to be significant investments in personnel and other expenses related to such efforts that NCHEMS does not include in this analysis. These, plus the associated attention given to such recruitment efforts, may distract from the principal goal of serving Oregonians if not monitored carefully. Oregon is not at all unique in this practice, as it has increasingly become a national trend for those institutions capable of attracting out-of-state students in the past. Moreover, Oregon benefits substantially when students from elsewhere are educated in its public institutions *and subsequently remain after graduation to contribute to Oregon's workforce needs.* And there is some early evidence suggesting that non-residents may be especially prone to enrolling in programs that are workforce relevant (see Virginia cost study report at www.schev.edu/coststudy).

From the institutional perspective, nonresident students play a critical role in supporting the operating budget, yet the degree to which each nonresident student brings in more funding compared to each resident student varies significantly. Though nonresident students generate more tuition and fee revenue than resident students, only resident students are counted in the state's funding model used to allocate Public University Support Funds (PUSF). At Eastern

Oregon University, the PUSF allocation per FTE exceeds the nonresident tuition and fee premium, or the additional tuition and fee payments collected from a nonresident relative to what an institution would have been able to collect from a resident student, after accounting for institutional aid. But this presumes that additional resident students are available and can be recruited to EOU. All other universities in the state collected significantly more revenue from each nonresident than they would have received in PUSF if that student had been from Oregon. These variations among institutions are caused by differences in tuition rates and in how institutions award aid dollars, as well as the way in which the PUSF funding model rewards mission differentiation and degrees to resident sub-group populations. It is critical to recognize that the additional dollars collected from nonresidents can be put to many uses, including by paying for the recruitment of those out-of-state students so that in-state resources are not used, helping support Oregon residents through targeted institutional aid or by relieving upward pressure on resident tuition prices, funding the development of new or expanded programmatic capacity in areas of state need, as well as other institutional priorities.[18]

Figure 68. Revenue from Nonresident Students vs. State Appropriations for Resident Students, FY 2021



Notes: Nonresident premium is full-time nonresident tuition and fee revenue minus resident tuition and fee revenue. Revenue excludes institutional aid. PUSF per FTE is based on FY21 allocations and 2020 Fall FTE.
Sources: HECC; IPEDS.

3. How might Oregon's higher education institutions best learn, collaborate, and advance a collective commitment to advance racial justice, equity, and inclusion on our campuses, in our communities and across our state?

In several important ways, Oregon institutions and the state as a whole have taken a leading role in exemplifying a commitment to social and racial equity, and in taking clear steps to better realize those ideals. Among the efforts in this vein are a clear and consistent expression of the need to address equity gaps in educational opportunity in strategic planning documents and in public expressions of state and institutional leaders, along with specific, practical

[18] Neither the enrollment of nonresidents (with exceptions for those situated along state borders) nor large institutional aid budgets characterize the experiences of community colleges, which explains their absence in this analysis.

initiatives to provide free college to members of tribal communities. This rhetoric is exemplified in Oregon's Equity Lens, a clear statement of values and aspirations for a just and equitable society that is designed to underlay decisions and motivate action.

And action has been taken. Portland State, for example, has initiated set of initiatives within its *Time to Act* plan for racial justice. The plan includes an equity scorecard with empirical metrics intended to show impact of the package of initiatives. The colleges on the eastern side of the state—Eastern Oregon, Blue Mountain, and Treasure Valley—are working together on a variety of fronts to address equity issues. The same is true of other institutions as well: it is evident that institutions are committed to working to achieve equity goals.

Yet there is more to be done. A good example of ways postsecondary institutions can collaborate can be found in the work of the Foundation for Student Success. This Foundation identified as set of institutions that had proven successful in reducing equity gaps and paired them with a set of other institutions committed to making such improvements—essentially creating a set of learning communities focused on reducing equity gaps. Case studies of these communities and other information are available on their website (https://fssawards.org/). A similar approach could be taken by groups of Oregon institutions working together to learn from institutions that have had success in some facet of improving campus equity. For example:

- Several institutions have invoked some variation of the National Football League's "Rooney Rule"—requiring the short list in all searches to include at least one individual from an underrepresented population. In fact, Oregon enacted a form of this requirement for hiring some positions within institutional athletic departments in 2019. Thus, a broader application of a similar rule to all aspects of the institution is supported by precedent in Oregon. Some institutions have been more successful than others in accomplishing this for occupations in which such candidates are difficult to attract. How did they do it?
- Some institutions have taken seriously the search for course materials that are culturally diverse. What materials have they identified and what processes did they use to identify them?
- Adopt predictive analytics, but in ways that do not bake in historic patterns of performance. Perhaps the best example of employing predictive analytics to remove equity gaps can be found in the work done at Georgia State University. (https://success.gsu.edu/approach/)
- Work together to share strategies for retention of minority employees.
- Do the detailed data and outreach work to make sure that all understand the different nature and needs of BIPOC communities in the different regions of the state.

As the debate over affirmative action unfolds with new cases before the U.S. Supreme Court, Oregon's institutions can collectively issue statements of support for the educational value and importance of diversity in classrooms, laboratories, and co-curricular experiences, drawing particularly on relevant research that demonstrates its links to educational outcomes, innovation and economic opportunity, improved societal conditions and civic behaviors. They

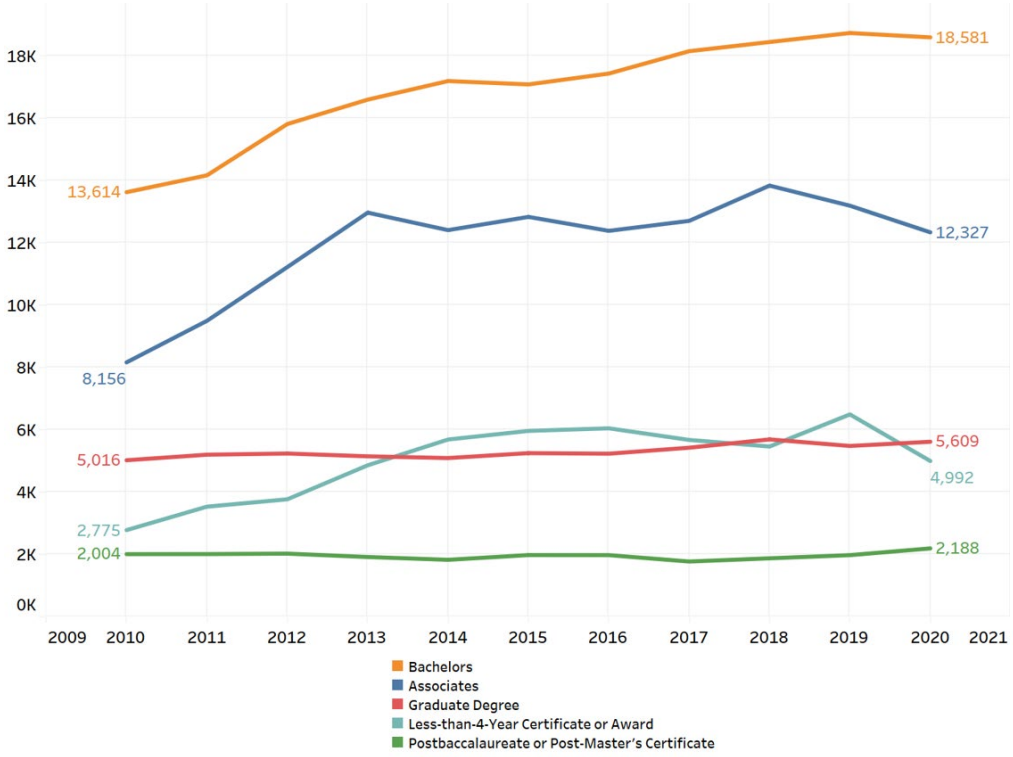
can also anticipate and plan for ways that preserve and enhance diverse representation on campus in the event that new policies and procedures are required in the wake of any judgments to come. Such plans should be consistent with any expressions related to audience that are a part of assignments of role and mission for individual institutions; for instance, some institutions may adapt policies that are enacted in other states to help promote diversity via an automatic admissions policy such as Texas's Ten Percent policy. All of the above suggestions require a forum in which these topics can be discussed, and good ideas shared. A role for HECC is to provide such a forum and provide staff work to gather information that will make these discussions more fruitful.

4. **Where might strategic investments be made in the teaching and research infrastructure and general operations of Oregon's higher education institutions to advance the higher education goals of the state, the missions of respective institutions, and contribute to economic development and social mobility in the state?**

   Despite a mixed enrollment picture among Oregon's four-year institutions, the number of bachelor's degrees awarded over time has consistently grown over the past 10 years, and the number of graduate degrees and postbaccalaureate and post-Master's certificates have all remained essentially flat (Figure 69). Associate degrees and certificates, however, have not experienced the same growth, and particularly decreased during the COVID-19 pandemic.

   These findings suggest the need for rethinking the approach to serving community college students, particularly the large number of students who attend college part-time. The pandemic created a situation that forced all instruction to be remote. Many students struggled with learning in this manner—but they also discovered that such learning allowed them to better manage the requirements of education with the other demands on their time. There is a statewide need for opportunities for faculty to learn how to better deliver courses using "flex" modalities tailored to the circumstances of individual students (and to do so in ways that do not destroy their own quality of life). Carried to the logical conclusion this need for tailoring delivery to the needs of each student leads to competency-based education as the wave of the future. This will require a complete overhaul of the approach to instruction, an approach that requires not just faculty development, but also development of a cadre of learning coaches and instructional design experts.

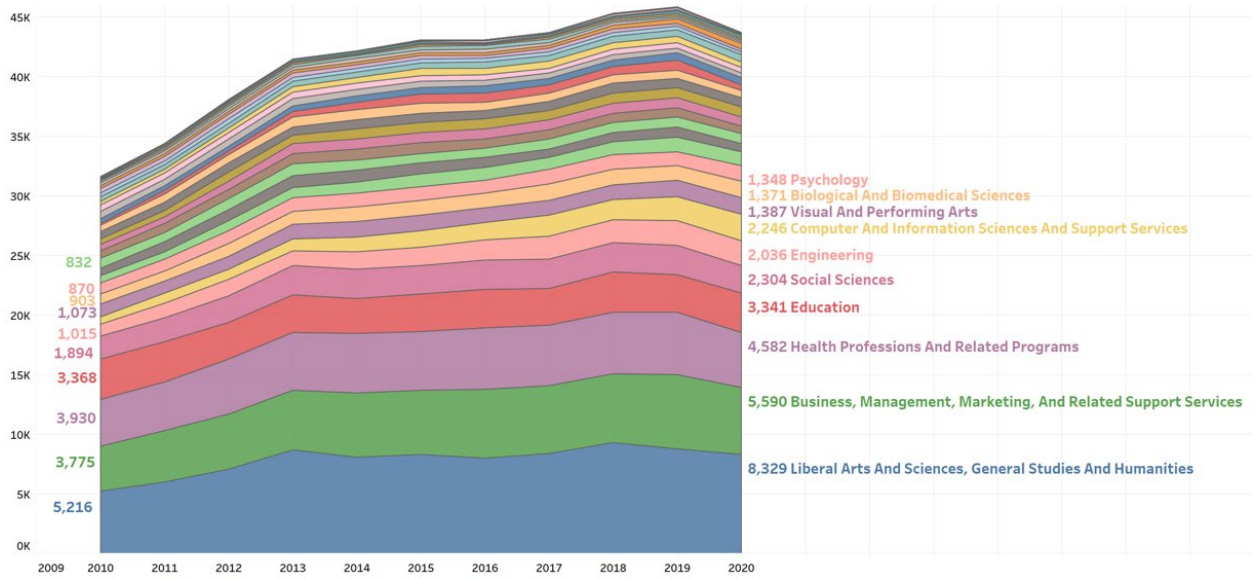
Figure 69. Credentials by Level Conferred by Oregon Public Colleges and Universities, 2010-2020



Source: NCES IPEDS.

Combining all degree levels, the most frequently awarded degrees and certificates over time have been in liberal arts, business, and health professions (Figure 70). Engineering and Computer and Information Sciences, the 6th and 7th most popular fields of study in terms of credentials awarded, have both grown substantially since 2010.

Figure 70. Credentials by Field of Study Conferred by Oregon Public Colleges and Universities, 2010-2020

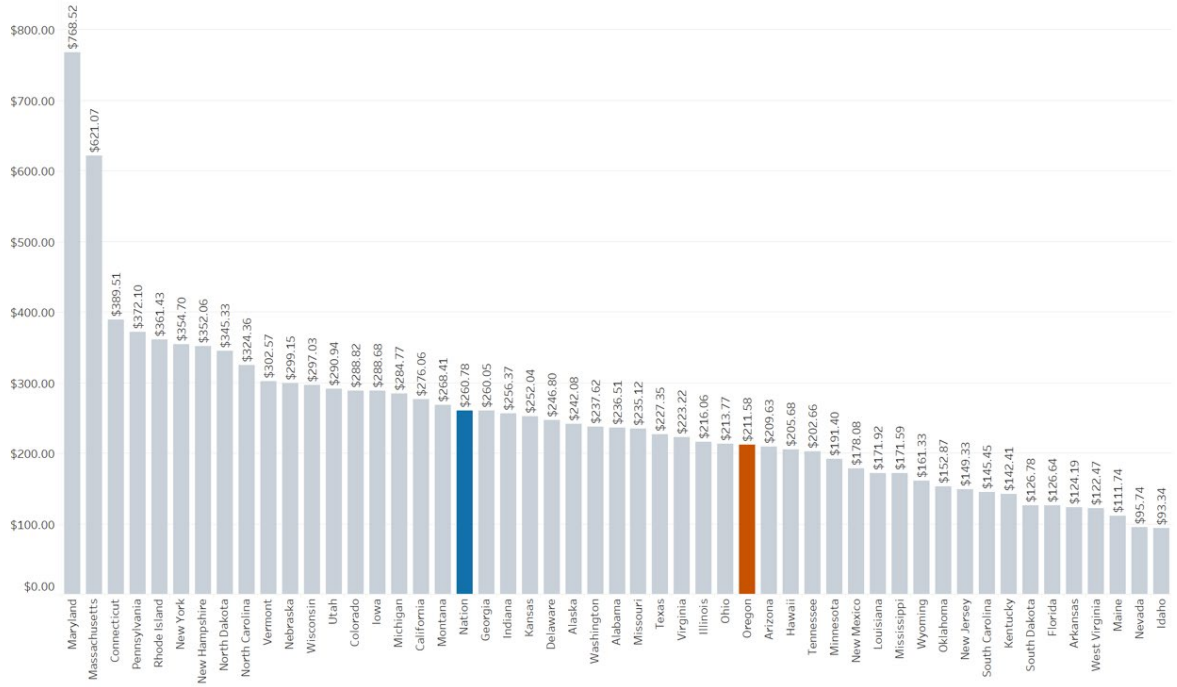


Source: NCES IPEDS.

In addition, more investment in faculty development for online instruction, as well as in developing a corps of instructional designers and student support coaches to better serve students in exclusively online and hybrid course. The latter two types of resources are ripe for sharing across disciplinary and institutional boundaries.

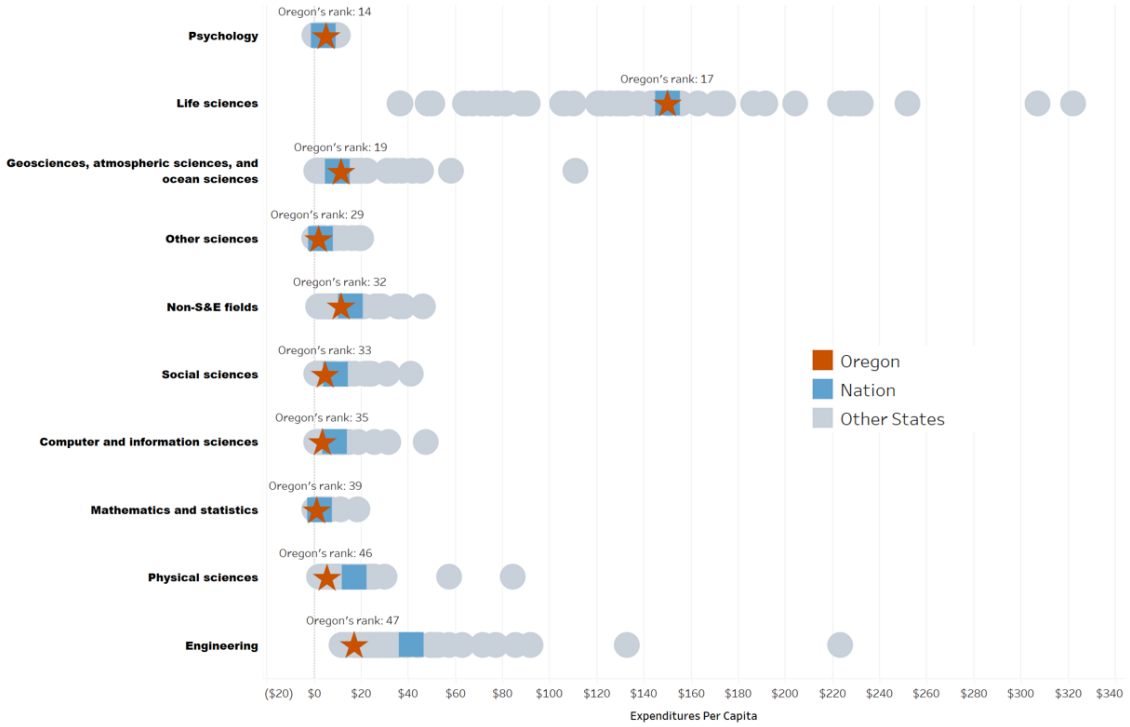
Oregon lags the nation in spending on research activity of all kinds, a condition that raises questions about the sustainability of Oregon's competitive position relative to other states (Figure 71). Breaking spending down by disciplinary cluster offers some insights about where investments are likeliest to pay off in raising Oregon's standing among states in research activity (Figure 72). That is, if Oregon is going to make an investment in boosting research productivity, perhaps as part of a strategic economic development plan linked to attracting or developing and retaining businesses in a particular industry, these data are instructive. They show that Oregon is most competitive in psychology, life sciences, and earth sciences, but its ability to rise in spending is very different for those areas. States that report more spending relative to their population, on research in the life sciences spend much more than Oregon does; for Oregon to make a significant move up these rankings and be better recognized as a center of excellence in life sciences, the state will take very substantial strategic investments (Figure 73). Moreover, Oregon's ranking in some disciplinary areas, such as computer science, is much lower than one might expect given how important those fields have been to the state's economy and to select, major employers.

Figure 71. Per Capita Research Expenditures, 2020



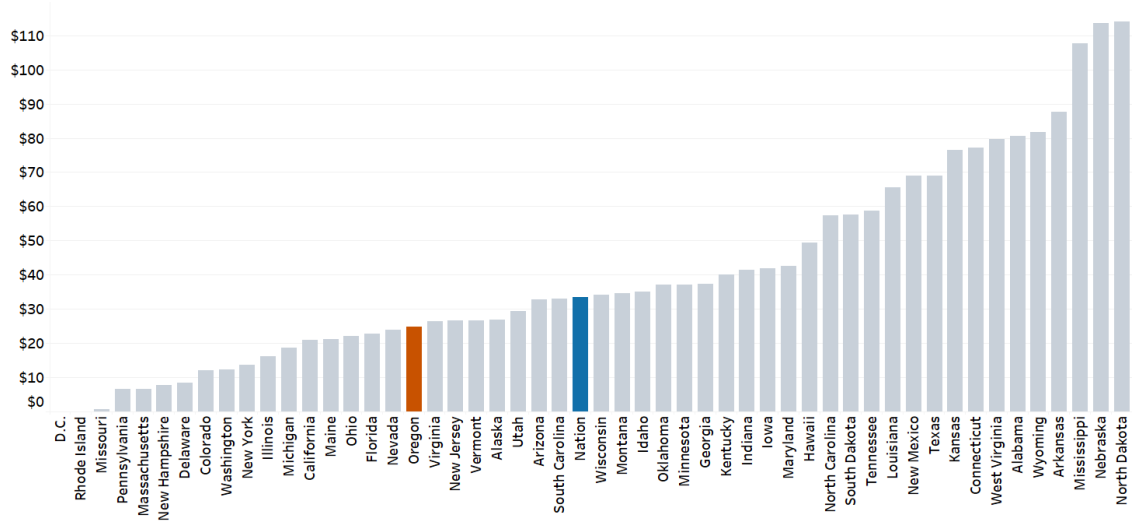
Sources: NSF-NCSES Higher Education Research and Development Survey (https://ncsesdata.nsf.gov/builder/herd) Total R&D Expenditures by Broad Field and Federal and Nonfederal Sources, Fiscal Year 2020; US Census Annual Estimates of the Resident Population for the United States, Regions, States, District of Columbia, and Puerto Rico: April 1, 2020 to July 1, 2021 (NST-EST2021-POP)

Figure 72. Research Expenditures Per Capita by Field, Oregon vs. Other States, 2020



Sources: NSF-NCSES Higher Education Research and Development Survey (https://ncsesdata.nsf.gov/builder/herd) Total R&D Expenditures by Broad Field and Federal and Nonfederal Sources, Fiscal Year 2020; US Census Annual Estimates of the Resident Population for the United States, Regions, States, District of Columbia, and Puerto Rico: April 1, 2020 to July 1, 2021 (NST-EST2021-POP)

Figure 73. State Investments in Research, Agriculture, and Medicine per capita, FY2021



Source: SHEEO SHEF, U.S. Census Bureau.

There are several areas in which investment in teaching and research infrastructure would be beneficial to the pursuit of these objectives. Among them are investments in:

- The development of a statewide economic development plan. Oregon has made a major investment in the semiconductor industry and maintains a statewide task force to help direct those investments and coordinate related activity. These commitments are timely given the recent passage of related federal legislation, and they actively engage government, industry, and higher education in a common quest to drive an important part of the state economy forward. More of this kind of coordinated activity is called for. Furthermore, this effort should be thoughtfully integrated in a comprehensive statewide economic development strategy that defines Oregon's comparative economic advantages, drives investments to elevate those industries through related research and development, advances efforts to recruit and retain key employers, boosts support for entrepreneurial and business development activities, and powers the creation and expansion of a talent base to serve them. The strategy should also synthesize efforts across industries and identify and seek to resolve gaps in residents' ability to participate fully, in particular with Oregon's Equity Lens in view. Lacking a state strategy for expanding the economy and the opportunities for individuals that comes with job creation, Oregon is out of step with the states with which it competes economically. From such a plan would flow several follow-on investments such as:
    - Investment in research infrastructure that would make the state attractive to industries dependent on high-end talent and seed the development of home-grown companies.
    - The identification of academic programs needed to support development of the necessary workforce, particularly in traded sector industries.
    - Support for efforts to eliminate barriers to full participation in identified in-demand jobs and industries.
- The necessary infrastructure for more extensive delivery of shared academic programs. The objective should be to ensure that programs can be delivered wherever in the state they are needed using existing educational assets. This requires common IT platforms and other capacities.
- Basic organizational structure to support the performance of shared administrative services.

5. Where might strategic changes in the current organization, structure, and policy of higher education in Oregon be made to advance the higher education goals of the state, the missions of respective institutions, and contribute to economic development and social mobility in the state?

Answers to this question flow from answers to the other questions and alignment of state policy with state goals. Important changes include:

- Being more explicit in the establishment of state goals about such priorities as
    - Linking higher education to the economic development needs of the state.
    - Ensuring that regional, as well as statewide, workforce needs are met.
    - Collaborating in the delivery of services.

    - Affordability for students, with special attention to adult and part-time students.
- Better aligning the funding models with state goals.
    - For community colleges this means that rewards for degree production should reflect contributions to regional, not just statewide, needs.
    - For universities, it means recognizing their contributions to the state's strategic economic development strategy and goals, as well as successfully educating Oregon residents at the undergraduate and graduate levels. Research competitiveness should also be rewarded for selected institutions. In addition, strong consideration should be given to rewarding institutions for contributions to the state's skilled workforce if they educate out-of-state students who remain in the Oregon workforce after graduation.
    - For all institutions, there should be established an investment fund that can be tapped with HECC and legislative approval for creation of new capacity. This capacity should be broadly defined to include:
        - Creation of new, high-cost programs.
        - Funding the infrastructure for support of shared services.
        - Acquisition of expensive research equipment needed to support programs critical to economic development in the state.
- Oregon should be more strategic in making investments with one-time funds that can generate institutional savings or produce new revenue for institutions.
- For students, the revision/expansion of student aid programs so that they better meet the needs of part-time adult students. In this context, think seriously about creation of earn and learn financial aid programs—a state work-study program. Examples exist in Arizona and Washington.
- Consider revisions to the program approval process.
    - For universities, base approval on a determination of whether or not a requested program is within an agreed-upon operational mission. Reserve the full program review process for instances in which falls outside the mission—essentially making approval of the program a change to institutional mission.
    - For community colleges (whose missions are to serve the needs of the students and employers in their district), presume that college leadership will be prudent in allocating scarce resources to new programs and speed the process for adding new programs to the list of approved programs.
    - Seek ways to use the program review and approval process to stimulate collaborations across institutional boundaries wherever possible, in order to ensure that programs that address localized workforce needs or student demand are available and delivered efficiently and affordably. HECC's efforts to help promote such collaboration should also engage OHSU. OHSU participates in program review activities as part of the Statewide Provost's Council, and it has established numerous constructive partnerships with public institutions to collaborate on programs where interests align. Yet institutions report a desire for deploying additional capacity in allied health and related programs at the undergraduate level to meet local workforce needs beyond what currently exists and in a manner

that is more flexible for the institutions. In this regard, HECC can exercise its planning authority to address these localized workforce needs, in consultation with public institutions, preferably by creating conditions that yield better and more streamlined collaboration between institutions, including OHSU.

6. **What are some promising innovations in curriculum design, delivery modalities, pedagogy, and degree design that Oregon's higher education institutions should explore in order to meet changing expectations and learning needs and interests of students?**

There is considerable evidence that students' primary reason for going to college is to prepare themselves for the world of work. Similarly, they tend to be retained better in programs that incorporate hands-on learning and real-world experiences. Existing practices have not always kept pace with these realities, but there is growing evidence that innovations can speed students' pathways to workforce-relevant credentials, sometimes at lower costs to them, without sacrificing quality. With this in mind, the following are examples of approaches that might be explored:

- Competency-based education (CBE). The poster child for this type of education is Western Governors University, but there are numerous examples of such programs on a smaller scale. Salt Lake Community College has moved its CTE programs into this format and the Utah System of Higher Education is moving to CBE in the general education components of transfer programs as a device to smooth the articulation process. Austin Community College has adopted this approach in some of its CTE programs. The benefits are that students have a transcript that indicates demonstrated competence in areas important to those making judgments about preparation for either further college work or for employment.
- Upside down curriculum—ensuring that students get workplace skills and some form of workplace certification in the first semester of their college experience. The Tennessee Board of Regents is moving toward a pilot of curricula that are designed in this way. The motivation was both to improve retention but also to ensure that students who are not retained to the completion of an associate degree leave with something of value.
- Design of programs that integrate work experiences into the academic program. Northeastern University's Co-op Program is a leading example of this, but there are other examples on a less grandiose scale. It is not uncommon for institutions to have an internship experience as an element of a program. The key is to make those internships 1) paid and 2) eligible for credit. The automotive tech program at Baton Rouge CC is a good example of such a program. The State of Washington has a state-funded work-study program designed with these principles in mind; its program is more geared to universities than community colleges but there is no reason it should be limited in this way.
- Scheduling optimization—some institutions and even some state systems (like the Virginia Community College System) are using data to better understand and deploy ways of streamlining the academic schedule that can improve student success, reduce barriers to credential completion, and be more efficient. The ASAP program at CUNY includes scheduling optimization (along with a variety of student support innovations) as part of its design.

- Develop new pathways to low-cost academic degrees. While there has been considerable attention to announcements of low-cost degree programs (such as the $10,000 bachelor's degree challenge issued in Texas some years ago), there are actual examples of such programs achieving success when they are well designed, aligned with employer needs and student demand, and offered at scale. One prominent example is Georgia Tech's online master's program in Computer Science.
- Any approach to delivering courses that make them more accessible to working students—classes at night and on weekends, courses that meet for a single extended period each week, short (5- to 7-week) courses, and courses that start more frequently than the beginning of the semester.

7. **Based upon knowledge of the evolving higher education landscape, how and where might Oregon's higher education institutions find promising strategies for collaboration that would advance student access to programs, student success, and potential cost efficiencies? Also, how might expanded cooperation with other educational systems such as K-12 school districts, apprenticeships, proprietary schools, and on-line institutions strengthen learning pathways into higher education and overall educational achievement in Oregon?**

   HECC conducts annual evaluations of the seven public universities in the state. A part of that evaluation details each institution's collaborative activity and participation in USSE shared administrative services.[19] In general, the section on collaborative activity in these reports focuses on participation in inter-institutional governance and planning forums (e.g., Council of Presidents); participation in statewide agreements and non-profits related to contracting, construction, internet access (NERO/Link Oregon), small business development (RAIN), library services (Orbis Cascade Alliance); and various collaborative activity of an academic nature. Across the universities, the reports describe an array of efforts, including:

   - Regional academic partnerships, e.g., SOHEC, co-admission to OIT and partnering community colleges
   - WOU's Willamette Promise, providing assessments for awarding college credits to high school students as an alternative to traditional dual credit opportunities.
   - Oregon Manufacturing Innovation Center Research and Development (OMIC), a joint effort involving OIT, OSU, and PSU to conduct applied manufacturing research, including shared activity. Funding comes partially from the institutions, private industry, the state, and some localities.
   - Program pathways, particularly for health programs offered in partnership with OHSU. OSU has supported several partnerships with other universities: agricultural sciences degree offered at EOU, which I think EOU has backed away from more recently; ecosystem workforce program with UO to provide applied research and policy resources to the state; and joint enrollment with community colleges.

[19] These evaluation reports are all captured on HECC's publications website at https://www.oregon.gov/highered/research/Pages/reports.aspx. The most recent reports for EOU, OIT, SOU, and WOU are for 2021; others' reports are for 2020.

- Shared facilities, e.g., Fourth and Montgomery Building to be shared by PSU, PCC, OHSU, and the City of Portland.
- Consistent attention (and typically verbatim language) discussing efforts to smooth transfer pathways, develop MTMs, etc.

There exists little evidence of collaborations occurring in online education and, apart from the OHSU agreements, few joint programs. Among those that were mentioned were: a joint bioengineering doctoral program at OU and OSU, PSU and UO are partners in a "Joint Campus" program that gives graduate students access to courses at the other campus without affecting their registration at their "home" institution. No doubt there is other collaborative academic activity that grows out of the shared interests among faculty at multiple institutions as well. These examples certainly indicate a willingness to collaborate, as do the public and private expressions of institutional leaders, but the issue remains one of scale, and a lack of sufficiently compelling incentives for institutions to take on the hard work of setting up and sustaining collaborations.

In numerous states collaborations across institutions, sectors, and types of organizations on administrative services are being used to achieve efficiencies. Since the dissolution of the Oregon University System, most institutions have maintained their participation in USSE offerings, even though the legislative requirement that compelled that participation has lapsed and recent desertions have raised questions about its necessity over the long term. UO elected to develop the capacity to provide most of the USSE-offered services internally, though it still participates in statewide collective bargaining. PSU has opted out of financial reporting, bank reconciliation, and endowment services. Others may follow. USSE operates on a fee-for-service basis. It is likely that its capacity to deliver economies of scale is tied to ongoing participation by either PSU or OSU, or both. Other states have seen collaborations in a variety of administrative services:

- Purchasing—Virginia and other states. In addition, the Midwest Higher Education Compact offers shared service arrangements on purchasing, risk management, and other services in ways that make them open to Oregon institutions' involvement.
- Library services
- Information technology
- Student Record Systems

In managing a shared services enterprise, there are some best practices, including:

- The use of technology to automate repetitive tasks.
- Among the most easily replicable services are educational programming (webinars) and consulting services across a collection of institutions (as in a system, but such a practice could be adapted for Oregon's more independent institutions).
- The definition of measures to document time and costs saved, as well as a method to track how any efficiencies gained are reinvested.
- Shared governance of an activity.

- Recognition of the different motivations of different institutions to participate—it is not necessary that all participate, especially in a proof-of-concept phase.
- Short-term costs will be higher—a realistic assessment of cost savings, with attainable goals, is needed, and it should be given sufficient time.
- Cost-sharing is necessary; institutions should have some "skin in the game." Being clear about what level of ongoing support is necessary for the activity to be sustainable is also critical—there is likely to be lingering "costs" associated with managing an activity across otherwise independent processes, procedurals, reporting lines, etc. that should be recognized. It may be overly optimistic to assume that the only costs worth counted are those expressed in dollars as the sole determinant of whether a collaborative activity is sustainable.

In sum, Oregon has not enough collaboration across universities in administrative services and, apart from continual conversations about transfer and articulation that span the sectors, too few efforts to collaborate on program delivery.