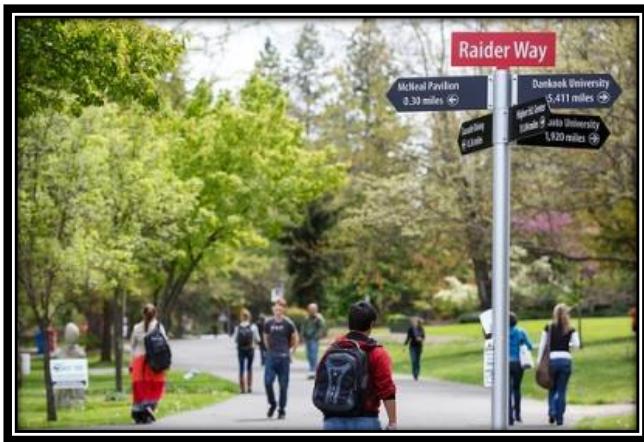


The Economics of Higher Education

An Environmental Scan of Today's Emerging Trends



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Executive Summary

Higher education is in fiscal crisis. State funding has long trended downward; resulting tuition increases and stagnating household income are putting higher education out of reach for more Americans. Colleges are challenged by high fixed costs. SOU has navigated decades of bad financial news; however, realistic options are growing increasingly limited. In this paper we examine the fiscal crisis and five trends to factor into strategic planning:

1. **Non-traditional sources of funding:** To develop new funding sources, colleges must re-tool thinking and systems. Sharply focused priorities help navigate competing priorities. A new entrepreneurialism is necessary; internal systems must support it. Larger and niche colleges will draw enrollments and resources.
2. **Completion:** Multiple forces are pushing a completion focus. All college systems must shift to support completion. Hard questions include: how do we handle students unlikely to succeed? And, are there barriers to completion to remove?
3. **Data analytics:** New but rapidly growing, data analytics offers promise for targeting resources more effectively. The question is how deeply to intertwine data analytics into systems.
4. **Collaborate or consolidate:** “Deep collaboration” can be an effective alternative to consolidation; with what education, or even for-profit, partners might we connect?
5. **Smart growth:** Careful allocation of resources allows enrollment to grow into existing fixed costs. The “smart” approach replaces *cutting* with *aligning* costs.

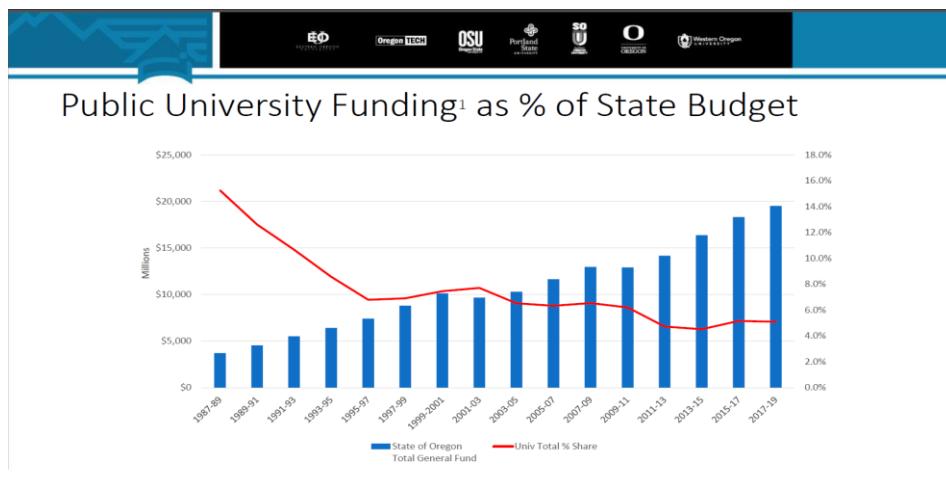
Addressing these trends is necessary to ensure a regionally-responsive institute of higher education serving Southern Oregon in 2050 and beyond. Planning based on these trends can help SOU become a more flexible organization and prepare to adopt further changes as the higher education environment continues to evolve ahead.

Environmental Scan: Where are we, and how did we get here?

Oregon's public investment in higher education has been declining for decades. Recessions in the early 1980s, early 1990s, and the "Great Recession" of 2008-2011 all caused drops in state revenue which resulted in cuts to funding for post-secondary education. Passage of Measure 5 (1990) led to fewer resources allocated to public universities and dramatically increased competition for funding among state agencies.

Decreased funding follows from reallocation of state priorities as well. Oregon is one of 11 states on the "dishonor roll" of states that spend more on incarceration than higher education. Measure 10 (1994) built new prisons and Measures 11 (1994), 57 (2008) and 73 (2010) filled those prisons via mandatory minimum sentencing and increased sentence lengths. In 2008-2014 Oregon reduced higher education spending 61 percent from while raising per prisoner spending 18 percent. (Douglas-Gabriel, 2015) – although our crime rate is 31 percent below the national average.

Additionally, Measure 25 (1996) and Measure 86 (2000) enshrined in Oregon's constitution limitations on state revenue. Measures 47 (1996) and Measure 50 (1997) imposed additional constitutional limits on property taxes. Most recently voters spoke loudly and clearly in rejecting Measure 97 (2016), which many hoped would provide needed funding for higher education.

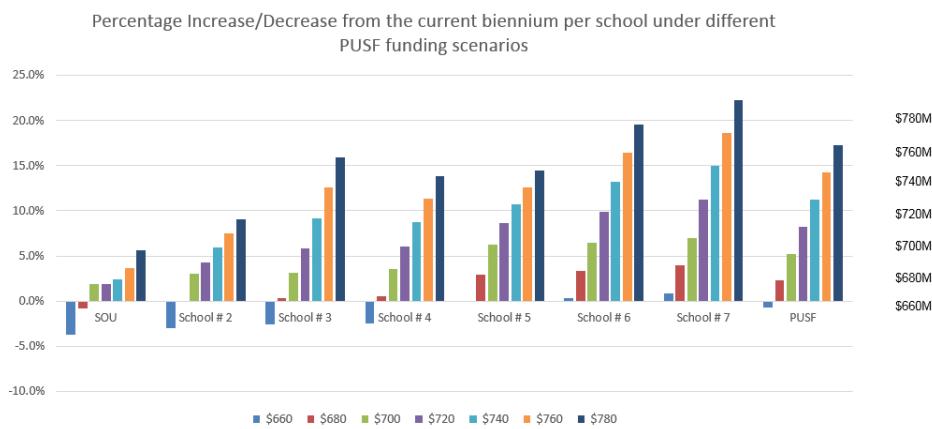


In 2015 Oregon did increase funding for higher education; however, the additional dollars still fell short of pre-recession levels. "Oregon reduced its state higher education investment by 61.5 percent [between 1980 and 2011]... Extrapolating this trend since fiscal 1980, the state investment will reach zero in 2036." (Winter, 2012)

Oregon's tax structure may be idiosyncratic, but the state is not an anomaly in higher education funding. Only three states have kept funding levels at pace with inflation and enrollment. The U.S. Department of Education reports that state and local higher education funding per FTE student fell 28 percent on average between 1989 and 2012.

Oregon's Student Success and Completion Model (SSCM) further complicates state funding. In theory this funding model accounts for factors specific to rural regional universities: smaller populations and lesser-prepared students who working more hours to make ends meet and transfer more. However, in viewing the outcomes one has to ask if it has left the smaller regional universities to die, starved of necessary resources.

SSCM was established with the belief that transition tools, particularly the stop-gain/stop-loss function, would smooth out any dramatic decrease in allocation compared to year-over-year, activity-based allocation. The model assumed universities' ability to affect change in a relatively short timeline, and required significant shifts in institutional practices over a three-year period to achieve completion goals.



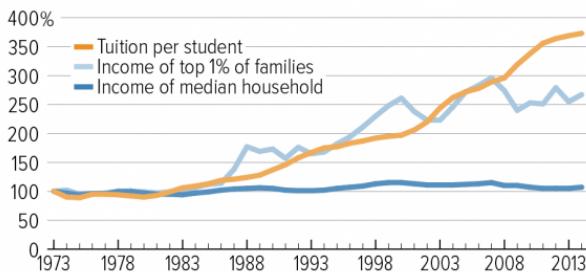
SOU Vice President for Finance Craig Morris pointed out to the Higher Education Coordinating Committee the resulting shortfalls for SOU by using the visual above. Funding increases to the Public University Support Fund (PUSF) at the far right represent the average increase in each scenario. The SSCM results in some institutions receiving funding increases greater than the PUSF average, and some well below the PUSF average. SOU (far left on the graph) receives only a fraction of the average funding increase in each scenario. Yet this is our state funding model for the foreseeable future.

These changes represent fundamental shifts in the political and social view of how to fund higher education. College degrees increasingly are regarded as a private good conferring individual benefit: improved earning power thanks to that degree. As such, students (and families) are absorbing increased responsibility for the cost. In 1987 state funding outmatched tuition revenue 3:1, but by 2013 tuition revenue was nearly equal to state and local revenue (Federal Reserve Bank of Cleveland, 2017). The cost of education borne by students and families is currently at 46.5%; before the Great Recession, it was 35.8%, and 25% in about 1990. (sheeo.org/news/sheeo-releases-state-higher-education-finance-fy-2015). Meanwhile, the Center on Budget and Policy Priorities (2016) reports that long-term trend in a growing gap between tuition and household income was thrown into sharp relief by the recent recession: “Tuition jumped nearly 30 percent between the 2007-08 and 2014-15 school years, while real median income fell roughly 6.5 percent over the same time period.”

As funding dwindles and tuition consequently rises, the limit to price elasticity becomes a major concern. At what point will fewer students attend college as a result of rising tuition? The graph below suggests that time is rapidly approaching. This will have a lasting impact on our future generations as higher education, even at relatively inexpensive public institutions, drifts out of reach for more of America.

Tuition Growth Has Vastly Outpaced Income Gains

Inflation-adjusted average tuition and fees at public four-year institutions and income for select groups (1973 = 100%)



Source: Center on Budget and Policy Priorities based on the College Board and Census Bureau. Tuition per student and income levels, adjusted for inflation, as a percentage of 1973-1974 price levels. Years shown and income data are for the calendar year. Tuition data cover the school year beginning in the calendar year.

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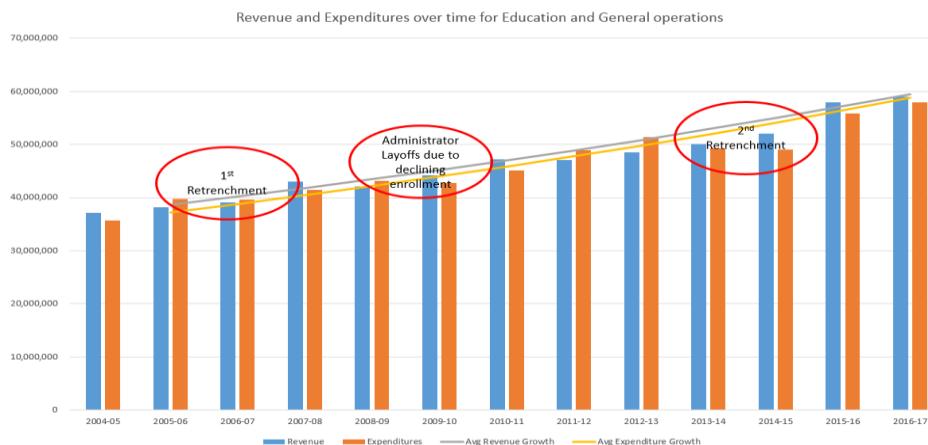
With a well-established trend of declining public funding, and foreseeable limits to tuition hikes, what are public colleges to do? From a financial perspective, there are four options to deal with fiscal crisis:

- 1) Increase revenues to keep pace with your expenditures;
- 2) Decrease expenditures to maintain pace with revenues;
- 3) Periodically make dramatic reductions in expenditures, resetting the bar, before allowing expenditures to outpace revenue growth again; or
- 4) Fundamentally restructure how higher education is funded and structured.

Given the above limitations on higher education's traditional funding sources, the obvious strategy becomes cost reduction. Public opinion demands it, and higher education has responded – with mixed results. Between 2000-2014 seventeen states, including Oregon, saw tuition hikes *smaller than* the lost state funding, even while increasing student services to support completion. In other cases, institutions implemented cost-reduction strategies (more adjunct faculty, larger class sizes, reduced student support) to manage ongoing costs, with some question regarding the impact on student success goals. Thin margins in higher education, particularly at small public

colleges, make it difficult to sustain cost reduction while retaining services necessary to support students from certain demographics.

Conditions outside the immediate control of colleges limit their ability to reduce costs. Oregon has tried and repeatedly failed to control PERS costs, a major driver in cost increases; union contracts further define labor costs and confine cost reduction strategies. With labor accounting for 80% of expenses, and two rounds of labor cuts through “retrenchment” already under our belt, SOU has largely pursued cost reduction strategies through the “reset” approach – a problematic strategy with negative effect on student recruitment and staff morale.



Each setback, such as an economic downturn, can send a small campus into crisis. SOU has experienced one crisis after another, with short reprieves in between, for several decades. To survive these crises we have adopted many cost-saving strategies including cutting faculty and staff. Further cuts jeopardize the institution. Alternatively, significant change(s) to the institution require resources we do not have, creating a Catch-22 situation.

The result is a systemic financial challenge, primarily driven by external causes. For public higher education as a whole, and specifically for SOU, traditional revenue sources are not keeping pace with expenditures; there are significant challenges to reducing expenditures further. Our financial model relies on premises that are rapidly

evaporating: state support and ability to raise tuition. In short, the current financial model is fundamentally unsustainable.

Where Do We Go From Here?

Thriving in a changing environment requires evolving our operating model. We are not in a position to experiment in hopes of inventing the new financial model that works; ***neither are we able to continue as-is*** – trying a little harder and making small changes around the edges. We must identify substantive, systematic changes that will carry us through the current planning cycle, while positioning SOU to quickly adopt new models developed and demonstrated by institutions with more resources. Here we explore five trends in higher education which create opportunities to stabilize institution cost structures and help ease pressure on tuition increases in the current planning cycle. In doing so, they create room to identify a long-term solution, fundamentally restructuring how higher education is funded and structured.

Trend 1: Traditional resources for higher education will not be increasing.

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Public funding for higher education has trended downward for decades; tuition is our major source of revenue, but we have reached a price point for our students. Therefore, revenue is relatively fixed. Aligning with this trend means finding a way to fit services to this budget while seeking *new, non-traditional resources*.

Recent analysis by Parthenon-EY's Education practice notes that institutions thriving in the new economics of higher education "have either found a strong niche or they operate at a large scale". The niche approach seems a closer reach for SOU but requires sharply defined purpose and programs; we would have to make proactive choices among the many things we want to or believe we should be doing. For example: given limited funds for instruction, should we use more term-by-term faculty members to keep class sizes small, or is it better to increase class size so classes are taught by regular faculty? Which approach fits better with a well-defined niche market position for SOU?

New, non-traditional programs can foster a distinctive niche for SOU. Using analytics (see Trend 3), best practices, and careful consideration of student and regional needs, we can explore aligning and coordinating curriculum, programs, and majors in

an *entrepreneurial* way which fosters high returns in student career development, retention and graduation efficiency, regional engagement, and grant money used towards student engagement. The SOU Laboratory of Anthropology (SOULA), the Southern Oregon Research Center (SOURCE), The Farm at SOU, Emerging Media and Digital Arts, The Oregon Center for the Arts, and the currently proposed program in Healthcare Administration provide examples of dove-tailing regional concerns with coursework, grant/contract-sponsored research, and cohort based hands-on experience for students. In different ways, each of these efforts create productive relationships with local and regional partners, leverage efficiencies across existing campus resources, provide internship and networking opportunities for students, tap alternative revenue streams, and help create a distinctive portfolio for SOU's public face that is tied to the character and needs of our region. Models that include strong student cohort experiences and employment/internship opportunities are known to increase retention and help students afford the increasing cost of attaining a college education.

Programs which promise employment if a student earns a degree make the debt of attaining a degree more feasible – with secured debt as a new type of resource. In areas such as Education, the Bulldogs to Raiders program, for example, could be extended through the graduate program with the promise of employment if the student earns a Masters of Teaching degree (or licensure). This has the added benefit of bringing diverse professionals into the marketplace.

Acknowledging the permanence of shrinking traditional revenues requires structuring ourselves to pursue additional funding sources, such as grants, gifts, and further business support. Increasing grants received may be accomplished through incentivizing faculty, or hiring a grant writer permanently or contracting/-outsourcing. Significant shifts in higher education philanthropy require adaptation in this area as well. Tuition reimbursement could be pursued as non-traditional revenue, blurring the line between giving and workforce development for regional employers.

Developing non-traditional resources requires universities to be more entrepreneurial, flexible, and responsive to a changing world than our past has required. Our high fixed

costs (land, labor, and technology) are also our resources; we must become nimble in deploying those resources, adapting in order to spot and grab emerging income opportunities to cover fixed expenses. Business structures and processes must support this new entrepreneurialism.

Trend 2: A strong focus on completion.

State funding for higher education has shifted to outcome- based (completion) in 38 states including Oregon. Growing student debt, with little opportunity to repay unless a degree is earned, creates an ethical imperative to structure ourselves in support of student completion for all students, not just Oregon residents. The importance of completion also follows from a shrinking pipeline of high school graduates – making each new student more important to retain. Enrollment growth requires focusing on students who are difficult to get here, difficult to retain, and difficult to graduate. These groups are a challenge to address, but key to growth given the smaller pipeline of “traditional” students.

SOU’s pattern of enrolling students who plan to complete their degrees at other institutions, or students not ready (likely) to complete, contributes to our difficulty adapting to the completion trend. SOU’s degree completion rates for Oregon residents are second lowest in the state, (3.3%) despite having the 4th largest total enrollment. If we do not successfully graduate Oregonians we do not earn needed completion dollars to go with in-state tuition.

While we can’t reach zero transfers out, it might be possible to reduce transfers out by clearly demonstrating that we are a great choice, and the SOU degree can be accomplished in four years or less. There could also be financial incentives that make staying past the sophomore or junior year more enticing.

The completion trend creates an imperative to identify who is unlikely to succeed (see Trend 3); we must then decide whether to refuse admittance to those students, or ensure the supports they need to be successful. Chasing enrollment numbers, without an eye toward completion, does not make sense for our future.

Aligning SOU with the trend toward completion requires orienting all university systems – advising, financial aid, etc. – this direction. Tightly connecting supports to the specific populations who need them – rather than offering them broadly – may limit cost; Reviewing our practices through the Smart Growth concept (see Trend 5), and compared to other institutions, may create clarity as to where we should reallocate resources for retention purposes. In order to be effective with remission and scholarship funds, we need to know the return on investment for students who receive these funds; institutional data may be reviewed (or, gathered in the first place) to determine “return on investment” in terms of retention.

Beyond university systems, how does the curriculum itself support completion? Are there barriers that can be remediated, and/or alignments created to increase the likelihood of completion?

As an institution, we need to make sure we understand exactly why students are leaving. Nationally it has proven difficult to determine why students leave an institution and where programs and services have not met students' need. Instead of making numerous suggestions, we would like to highlight that the university must overall-- to every employee, to every level of employee-- make retention their main goal.

Finally, we should make sure that SOU is known for who we are: a quality university serving a region of the State of Oregon that is a much lower socioeconomic student population than the rest of the state, and that these types of students are a retention challenge. While recognizing that state support of higher education is not likely to increase, we can and must create public understanding that a regional university should be about access as well as completion, and state funds should follow accordingly.

Trend 3: Analytics provide useful data about where to put resources.

Data analytics is an exploding new field that transforms the way businesses relate to customers. It involves the application of tools to large sets of data to identify patterns that describe and predict behavior. “Most businesses have long collected data through their customer relationship management system and other sources, but today,

predictive analytics is giving them new ways to use that data to improve decision making, increase return on investment on marketing campaigns, and speed and strengthen business processes throughout the organization. Global spending on Big Data and predictive analytics is expected to grow at a rate of 30 percent or more per year and will hit nearly \$120 billion by 2018." (onlinemasters.ohio.edu)

While higher education is NOT a business, and numbers are not the sole driver in our decision-making, analytics help even mission-driven organizations by illuminating trade-offs and helping to identify effective ways to achieve goals using limited resources.

Analytics can be applied to a wide range of factors in higher education including financial aid, enrollment, performance and persistence. For example, financial aid may be awarded more strategically based on data showing a student's likelihood to persist. Institutions are finding value in gathering and analyzing data from a wide range of campus services and using this to serve students more effectively and efficiently, actually increasing student satisfaction in their college experience. This model shifts some of the analytics responsibility away from institutional research and combines efforts from multiple departments (Beckwith, 2016).

This same analysis can be applied to degrees and programs, in relation to the changing revenue drivers. Potential uses include:

- 1) Identifying degrees with the best completion rate, who completes them at what pace, and what factors impact completion. This particularly matters for Oregon residents, who the state funds based on completion; analysis of this data may affect what degrees are marketed specifically to Oregon residents as well as behavioral supports offered to those students to ensure completion.
- 2) Analyzing true cost to deliver a degree, factoring in both instructional and non-instructional costs (ie support services, housing etc.) as well as cost-offsets such as alumni giving – do certain majors produce students who are more likely to give to SOU later? This data can be used in determining for example which programs to market to out-of-state students (those programs with the highest ROI). We can also examine the true cost or ROI of non-major programs such as Degree in Three.

- 3) Examining costs to deliver academic supports to underserved populations (veterans, rural, minority, first generation). Do these efforts produce improved completion rates, and if so does the state “bonus,” subsequent alumni giving, or other revenue offset the costs of the support programs?

In examining these sorts of questions we must be abundantly clear that revenue is not mission; however, revenue does affect what supports we are able to provide effectively. Analytics are not the bottom line, but a tool to help us make well-informed decisions.

Using analytics thoughtfully and comprehensively, we can both contract and grow programs to match our changing environment – to offer degrees that are sought, to students who can complete them successfully with the supports we provide. Analytics may help identify issues with enough warning to plan to sunset programs in a way that reflects our best self - not in crisis, with a hatchet, but in a planned and careful way. It can identify patterns that help us in making informed rather than reactionary decisions.

Like other technological trends, the widespread adoption of data analytics, like the adoption of social media marketing, is rapidly creating an environment in which it become untenable not to use such technology. The question is not whether to do this – as we are currently doing – but how deeply to weave analytics into assessment and decision making. Deeply embedded analytics are increasingly essential to effective use of scarce resources. At the same time, it is true that private companies are making big money off the provision of analytics, and also that analytics are predictive for populations, but not for individuals. All these points must be factored in when determining how to investment in analytics.

Trend 4: Collaboration or Consolidation

Many industries are seeing a trend toward consolidation, with “an 81.4% increase from 1997 to 1998 alone” (businessvalue.com/resources/Valuation-Articles/Impact-of-Industry-Consolidation.pdf). While in 1960 the top ten financial firms were 20% of the market, “as of 2013, the top ten banks had 70% of the market” (Garland, 2014). “Too big to fail” became a familiar refrain in the Great Recession, but legislation to rein in

mergers among financial firms has struggled. Higher education conditions are ripening toward consolidation as well. The Parthenon study (see Trend 1) flatly notes “the market for students can no longer support the number of institutions operating today.”

Institutions driven to merge for survival typically sacrifice mission for nominal continuation. Collaboration – deep partnership – is a strong alternative to consolidation. Creatively exploring alternatives *including those which are quite uncomfortable* may be a critical way to preserve autonomy and regional responsiveness. We must keep our eye on the ball: ensuring the continued viability of an institution of higher education whose mission is to serve Southern Oregon. Collaborations could include:

1. Outsourcing:

Outsourcing is common to many business sectors. SOU has outsourced the bookstore and food services. Should SOU consider further outsourcing of other services? How can outsourcing be implemented as a partnership, ensuring services continue to be tied to institutional mission?

2. Expand Student Employment:

Research indicates student employment can be a significant factor in retention. Some institutions have reduced overall labor costs by shifting some types of work into student labor. This allows institutions to maintain services *and* provide a path for students to “earn & learn.” Additional costs for supervision and training of a larger, transient, part-time, and inexperienced workforce of students may be more than offset by OPE savings. Is this an option for SOU? Would collaborating with our students as an integral part of our workforce actually enhance SOU’s retention and reputation? Along these lines, could we better utilize student employees and/or Capstone projects to produce items that may benefit the institution, such as marketing materials, videos, artwork, surveys, studies, research, computer programming (e.g. apps) and similar products?

3. Rethink Composition of Faculty

There has been an increase in contingent faculty across Higher Education, both employing term-by-term and non-tenure positions. A few institutions have been able to

shift the distribution of faculty across ranks through careful hiring of new faculty at different stages in their careers. With so many upcoming retirements at SOU, is it worthwhile to explore means to sustain a more differentiated faculty mix (similar to what we do in admissions when looking at student mix) to avoid repeating the cyclical compacting of the ranks SOU experiences about every 20 years? Could we partner with RCC in hiring faculty, possibly providing a sustainable path for term-by-terms? Can we partner with other institutions in hiring online faculty, to attract strong faculty and ensuring continuity while managing costs?

4. Partnerships and Shared Services

Colleges across the country are exploring creative partnerships and shared costs. Most models involve small institutions (under 3000) merging with each other or larger institutions in their geographic region. This has not been an option SOU wanted to consider; indeed, the Parthenon study notes “the biggest obstacle to deeper partnerships is pushback from various constituencies, including trustees, faculty members, students, and alumni.” However, deeper partnerships may be a means to gain some of the benefits while retaining local control.

Following the break-up of the Oregon university system, some shared services were retained; some costs were added due to lost economy-of-scale opportunities. Beyond services shared among the seven public universities, is it worth exploring partnerships with SOESD, RCC, and/or OT, to find economies of scale? What about partnerships with for-profit organizations?

Trend 5: Smart Growth

“Smart growth” as articulated by the Educational Advisory Board aims to handle more students within existing resources. Doing so creates revenue that outpaces direct expenses (costs that vary with enrollment numbers) and thus improves our ability to handle indirect expenses, or fixed costs. “The only way to rebalance the cost and revenue equation... and to ensure a sustainable financial future is to grow revenues while holding costs flat – essentially ‘growing into’ your existing cost structure” (Educational Advisory Board, 2012).

To that end, we can ask what is the right *number* of students, and what is the appropriate *structure* to serve those students? It is unlikely that SOU currently has the right answer to either. Smart Growth proposes a path forward, matching current structure to a future larger student population by identifying efficiencies in the current structure and applying those resources to fund growth in emerging student populations.

Past attempts to find efficiencies have consisted of reducing staff and cutting supply budgets (“do more with less”). Smart Growth proposes maximizing resource utilization: rethinking the classroom to remove constraints, finding hidden capacity in low enrolled classes and removing unnecessary sections in the curriculum, eliminating bottlenecks that prevent student progress, and improving alignment of optimal class size with classroom assignment. Efficiencies are identified through use of analytics and establishing transparent metrics, and by working collaboratively with faculty rather than against them to identify problem areas and seek solutions.

Once you have found the efficiencies, how do you invest them? Understanding the spectrum of student needs and support services, and having the ability to match them efficiently, are key. Smart Growth requires learning how to accurately predict student demand, thus placing limited resources where they are best utilized. Institutionally, it requires developing the will to- act when data does not support continuation of academic and non-academic programs and initiatives. New academic growth must be based on data-driven metrics and analysis procedures to map out success before engaging.

Through these aspects of Smart Growth, SOU will not reinvent the structure of higher education, but will improve efficiency, financial sustainability, and access through organizational efficiency. This will not be the solution for the university of 2050, but it will be the solution for the university of 2020, which will then lay the foundation for the road to the university of 2050.

Institutions today need to offer resources more *effectively* to lower operating costs. These shifts may require institution-wide commitment to new course scheduling methods, academic delivery methods, and greater collaboration/integration between

academic and student support services. Future staffing decisions will likely change from historical models to data driven models that focus on demonstrable student demand.

Conclusion

It is not an option to conclude that solving this challenge is outside our ability. Past cost cutting has not produced long-term solutions, and the current model of offsetting state funding declines with tuition increases is unsustainable. Before us are two tasks: to find efficiencies in our structure, and seek new students and new learning models, so that we buy time for a sustainable solution. Within this paper, we have explored emerging trends in finding efficiencies, improving student outcomes, and more effectively playing the evolving game of higher education funding to buy that time.

We are reminded of a story from Arabian Nights, in which a prisoner was to be executed. Before his execution, he was given his last audience with the Sultan. He said to the Sultan, "if you spare my life for one year, I will teach your favorite black stallion to speak". Upon hearing this, the Sultan exclaimed "I would love to see you accomplish such a feat, of course, I will spare your life for an additional year". Upon being returned to his cell, the other prisoners asked how he intended to accomplish such an incredible feat. He replied. "Who knows? In one year, I may die of natural causes, and not be executed. In one year, the Sultan may die, and I won't be executed, or who knows? I may teach his stallion to speak, but I have bought an extra year."

Our financial difficulties are our Sultan, threatening SOU's future. Ultimately, our goal is to adopt a financial model that spares us from the sword permanently; more immediately, we must create the room to operate successfully. We must recognize that tuition and state funding will continue to be a major part of our funding, but in their current forms there is no salvation. Identifying and taking advantage of emerging trends – the real opportunities and limitations around us – can buy time *and* build readiness to latch on to a new model of higher education funding as it evolves, is tested and proven successful by others. We don't have to innovate the new model of higher education – but we do have to position ourselves to be an early and effective adopter.

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