State Longitudinal Data System Update

National Center for Higher Education Management Systems (NCHEMS)

Return on Education Investment Project

April 10, 2012

The OEIB is required by Senate Bill 909 to develop a data system that is able to calculate an education return on investment (ROI) by June 30, 2012. A national literature review was conducted fall 2011 to find a suitable model to determine the value delivered by the State's education system; however the only systems located looked at individual education sectors that would require extensive data collection by postsecondary institutions. The Education Investment Project Team learned that NCHEMS was just completing a project with CLASP, a national non-profit organization building a model that provides a more complete ROI analysis than the earlier tools under consideration by OEIB including 1) impact on state revenues, 2) social service costs and 3) public safety systems and can also be built with existing data at the state level. NCHEMS will build on its previous work with the state for the Postsecondary Quality Education Commission and their ROI work with CLASP and provide OEIB with a model that measures the full impact of Oregon's education system within the legislative timeline.

Building out the NCHEMS Return on Investment Model to include P-12

Under the Postsecondary Quality Education Commission, NCHEMS created a return on investment model specific to Oregon to identify the investment requirement to reach the 40/40 attainment goals for college degrees and certificates. The model enables users to gauge (through an interactive dashboard) the levels of performance needed in college participation and completion to meet certain levels of educational attainment in the state. NCHEMS adapted this model to capture the monetary returns to both individuals and the state as a result of achieving the postsecondary goals for every state. To meet the requirement of SB 909, NCHEMS will work with OEIB staff to incorporate the P-12 system data and outcomes into the model.

Activities will include:

a. NCHEMS will gather data from the Oregon Department of Education (ODE) on the year-to-year persistence patterns of students by grade, economic status, and race/ethnicity. Also included will be data on the long-term impact of preschool programs – as measured by assessment scores and grade persistence several years later.

b. NCHEMS will incorporate the data and findings from the existing ROI model and change the interactive dashboard to reflect additions to the model.

c. NCHEMS will present the model to members of the OEIB.

The ROI model will allow policy makers to predict the impact on student completion rates and calculate a statewide education return on investment for the P-20 education system when adjusting education policies and resources at key points in the delivery system (grades and institutions) and for various groups of students (all students, and identified groups of disadvantaged learners).

Chart 1: Oregon's Student Flow Model

Sensitivity of the Performance Measures: The Impact of a 5% (rate) Increase*

PerformanceMeasure			Performance		Additional Credentials/Degrees			Cost to State at Current $ per FTE	Increase in Tuition Needed with No Additional State Investments To Maintain Current Funding Levels			
			Current Performance	Projected Performance	Cerificates	Associate	Bachelor's		Public Four-Year		Public Two-Year	
Inputs		1. HS Graduation Rate	71.2%	74.8%	97	915	2,119	$12,241,229	$86	1.2%	$81	2.7%
		2. Annual GED Production	8,761	9,199	Need More Information							
		3. College Going Rate (Directly Out of High School)	60.0%	63.0%	97	915	2,119	$12,241,229	$86	1.2%	$81	2.7%
		4. First-Time Participation Rate, Age 20-24	9.7%	10.2%	110	1,008	105	$9,832,336	$5	0.1%	$135	4.5%
		5. First-Time Participation Rate, Age 25 to 49	1.04%	1.09%	138	658	18	$6,167,628	$1	0.0%	$87	2.9%
Throughputs	Public Four Year	6. First-Year Retention Rates	78.6%	82.5%	-	13	3,384	$7,328,272	$96	1.3%	$0	0.0%
		7. Six-Year Graduation Rates of First-Time Freshmen	53.1%	55.8%	-	12	3,154	$1,414,807	$18	0.3%	$0	0.0%
		8. Four-Year Graduation Rates of Transfer Students	55.4%	58.2%	-	7	1,033	$402,514	$4	0.1%	$0	0.0%
	Public Two Year	9. First-Year Retention Rates	51.8%	54.4%	285	2,403	-	$13,067,667	$0	0.0%	$185	6.1%
		10. Six-Year Graduation Rates of First-Time Freshmen	11.9%	12.5%	311	2,286	-	$803,344	$0	0.0%	$12	0.4%
		11. Transfer Rates to Four-Year Institutions	14.1%	14.8%	-	7	1,046	$924,148	$9	0.1%	$0	0.0%
		12. Annual Production of Certificates	5,184	5,443	2,203	-	-	$881,280	Not Available			

Potential Scenarios of Focus (Applying the 5% Rate Increase)	Additional Credentials/Degrees			Cost to State at Current $ per FTE	Cost to State Per Degree	Increase in Tuition Needed with No Additional State Investments To Maintain Current Funding Levels			
	Certificates	Associate	Bachelor's			Public Four-Year		Public Two-Year	
HS Graduation Rate Only (1 Above)	97	915	2,119	$12,241,229	$3,909	$86	1.2%	$81	2.7%
HS Graduation Rate and College-Going Directly Out of HS (1 and 3 Above)	198	1,862	4,312	$25,094,519	$3,938	$175	2.4%	$164	5.4%
Four-Year Performance (6, 7, and 8 Above)	0	20	4,417	$7,730,787	$1,742	$100	1.4%	$0	0.0%
Two-Year Performance (9, 10, and 11 Above)	311	2,410	1,046	$13,991,815	$3,714	$9	0.1%	$185	6.1%
HS Graduation, College Participation, Completion in Two Year (1-5, 9-12 Above)	2,982	6,089	5,496	$56,765,720	$3,897	$190	2.7%	$550	18.2%
Inputs Only	448	3,529	4,436	$41,094,484	$4,885	$181	2.5%	$373	12.3%
Throughputs Only	2,515	2,430	5,499	$22,624,504	$2,166	$109	1.5%	$185	6.1%
Five Percent (rate) Increase On All Measures	2,983	6,110	10,120	$64,917,917	$3,379	$289	4.0%	$550	18.2%
Scenario to Achieve 40%-40%-20% Goal	527,643	88,832	72,881	$238,658,105	$1,503	$154	21.6%	53,827	226.4%

*Applying the same magnitude of change to each metric

Note: The "Cost to State" reflects the additional state appropriations needed to maintain current levels of institutional funding per FTE student if tuition and fees remain the same. Conversely, the "Increase in Tuition Needed" reflects the additional amount students would need to pay with no additional state investment – maintaining current levels of institutional funding per FTE student. They reflect the two extremes – the state pays or the students pay. Any realization of these targets would likely result in a finance strategy that lies somewhere in between.

Calculating the Economic Value of Increasing College Credentials by 2025
Oregon

Start Over | Save Scenario | Print Page

Increase College Attainment | View Returns on Investment | Instructions and Definitions

Set Postsecondary Performance Goals for Year 2025

Increase College Access

Avg. Performance of Top 3 States

High School Graduation Rate	74.8%
College-Going Rate Directly from High School	46.5%
20 to 39 Year Olds Enrolled in College	1.38%

Increase Number of College Credentials

Undergraduate Credentials Awarded per 100 Students

Public Research	20.8
Public Bachelor's and Master's	19.9
Public Two-Year	13.1
Private Colleges	29.2

Change Enrollment Pattern of Additional First-Time Students

	Directly from High School	20 to 39 Year Olds
Public Research	44%	5%
Public Bachelor's and Master's	10%	3%
Public Two-Year	24%	80%
Private Sector	22%	13%
Must Equal 100%	100%	100%

2025 Enrollment patterns of additional first-time students as a result of the improvements made above.

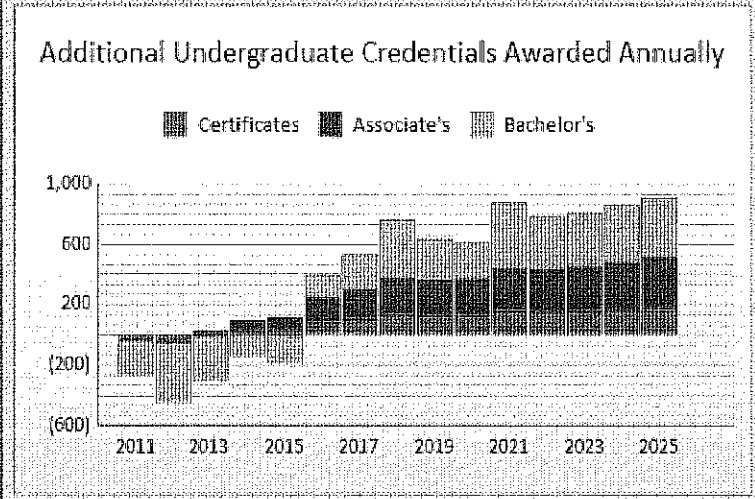
Optional: Set 2025 College Attainment Goal (%) 60.0

(Current College Attainment of 25 to 64 Year Olds is 38.6%)

Gap: Additional Degrees Needed to Meet Goal 252,022

Results: Additional Undergraduate Credentials Awarded by 2025

Associate's	2,827	+	Bachelor's	1,964
		=	Additional Degrees	4,791
			Undergraduate Certificates	1,313
			Total Additional Undergraduate Credentials	6,104



Note: The default positions reflect current rates and values. The results in 2025 assume linear progress toward goals.

Created by NCHEMS and CLASP

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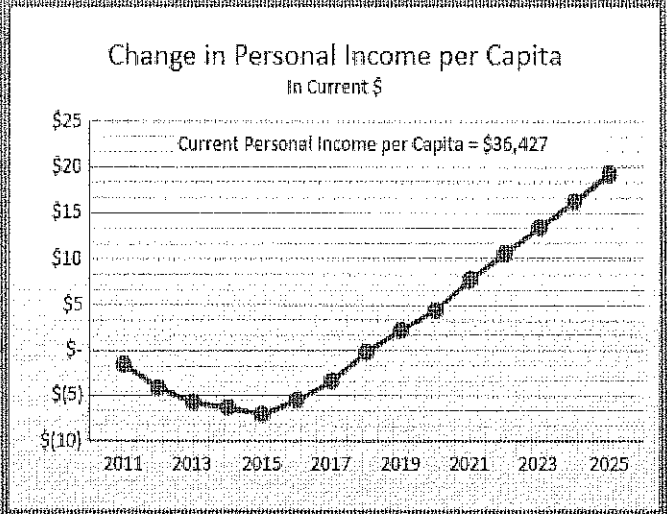

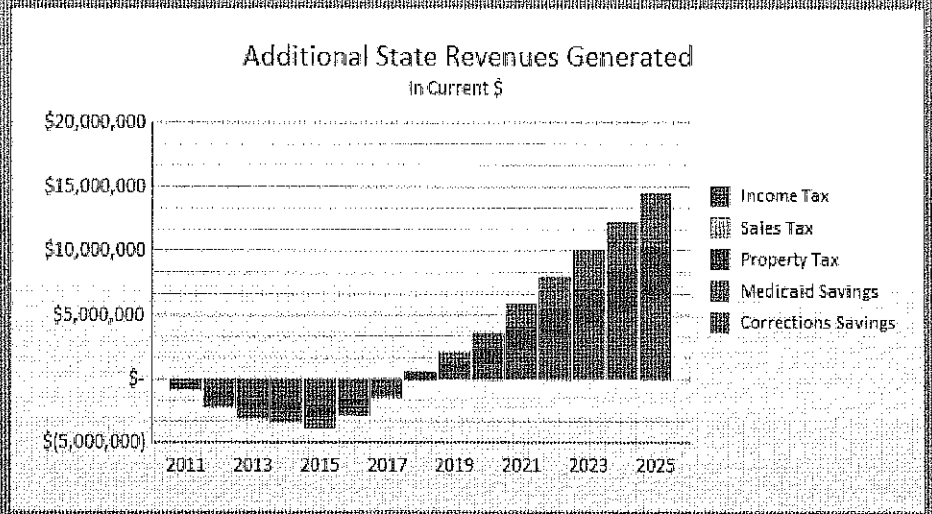

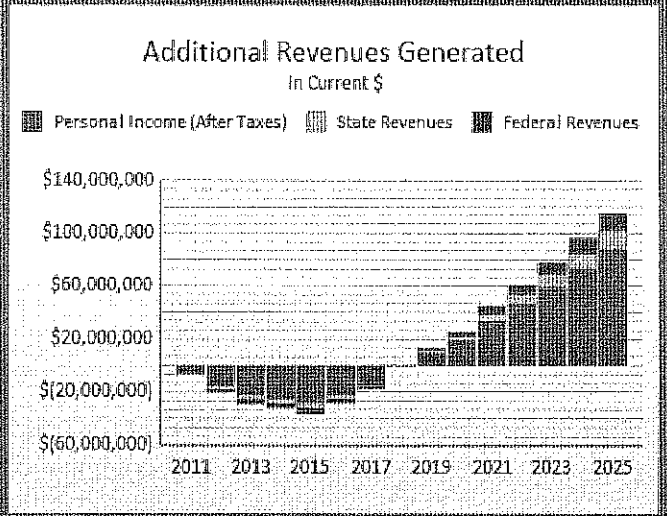

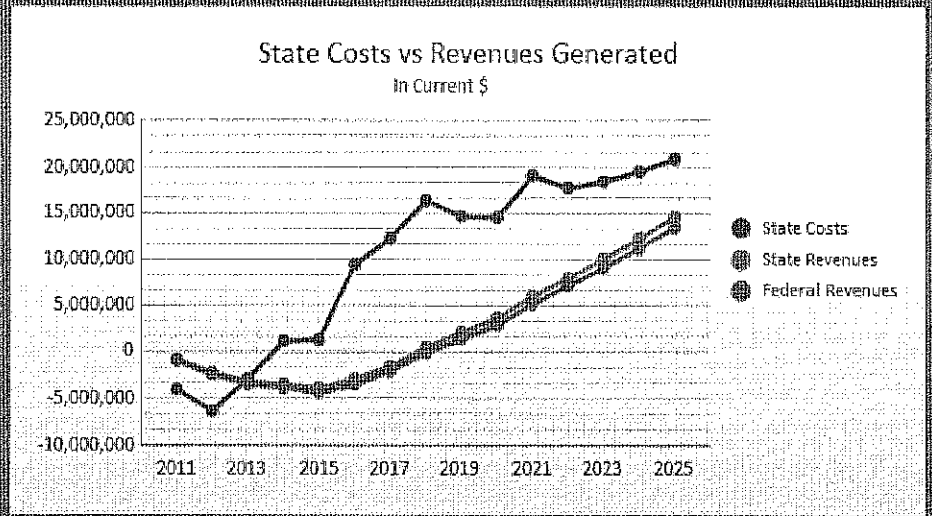

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Set Postsecondary Performance Goals for Year 2025

Increase College Access

Avg. Performance of Top 3 States

High School Graduation Rate	86.0%
College-Going Rate Directly from High School	75.0%
20 to 39 Year Olds Enrolled in College	1.50%

Increase Number of College Credentials

Undergraduate Credentials Awarded per 100 Students

Public Research	25.9
Public Bachelor's and Master's	24.4
Public Two-Year	42.3
Private Colleges	36.7

Change Enrollment Patterns of Additional First-Time Students

	Directly from High School	20 to 39 Year Olds
Public Research	44%	5%
Public Bachelor's and Master's	10%	3%
Public Two-Year	24%	80%
Private Sector	22%	13%
Must Equal 100%	100%	100%

2025 Enrollment patterns of additional first-time students as a result of the improvements made above.

Optional: Set 2025 College Attainment Goal (%) 70.0

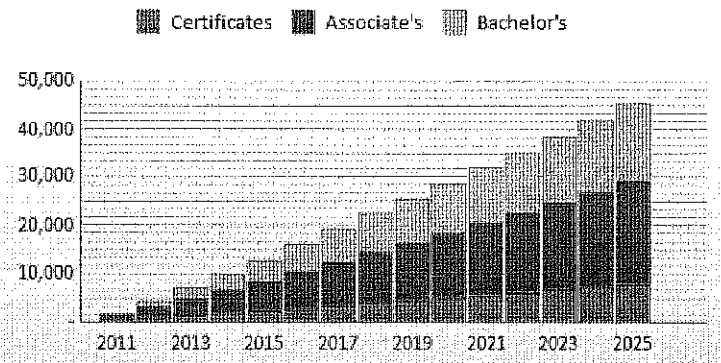
(Current College Attainment of 25 to 64 Year Olds is 38.6%)

Gap: Additional Degrees Needed to Meet Goal 482,076

Results: Additional Undergraduate Credentials Awarded by 2025

Associate's	161,386	+ Bachelor's	121,517
		= Additional Degrees	282,903
		Undergraduate Certificates	59,344
		Total Additional Undergraduate Credentials	342,248

Additional Undergraduate Credentials Awarded Annually



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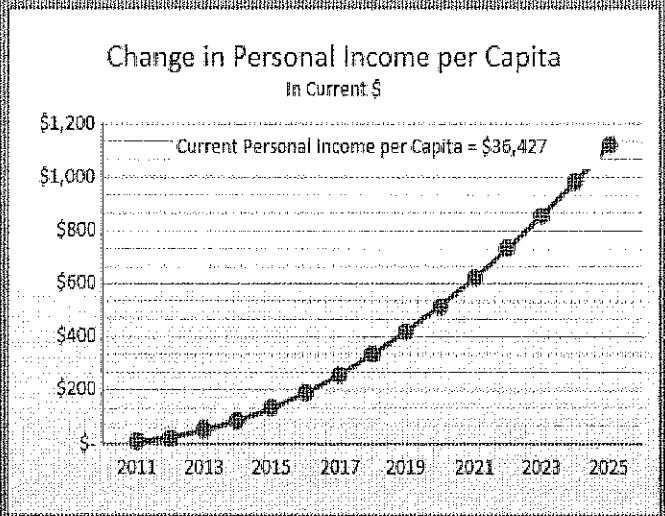

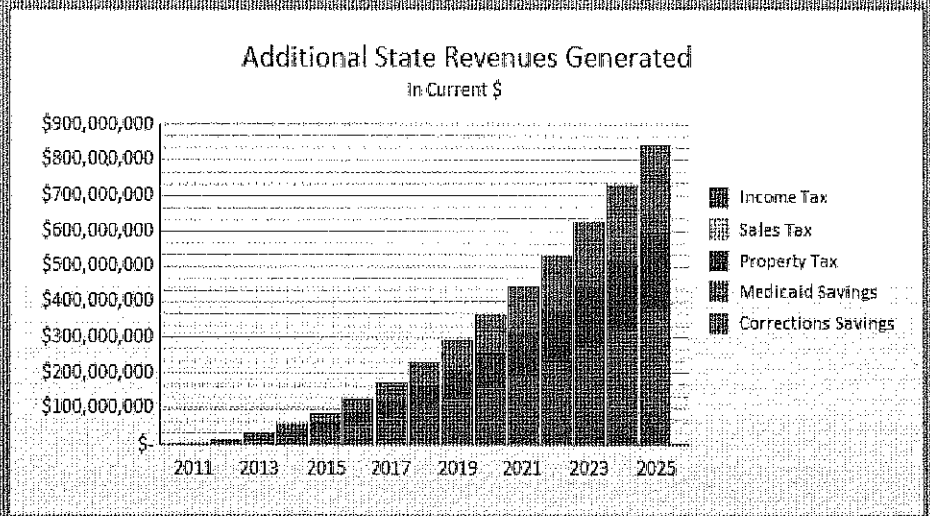

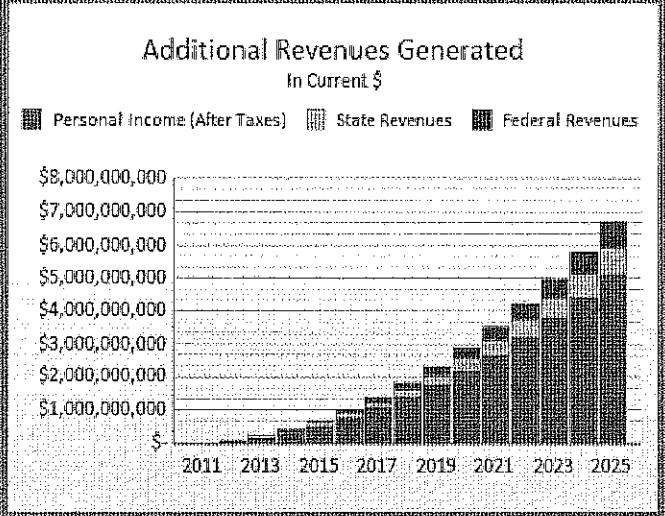

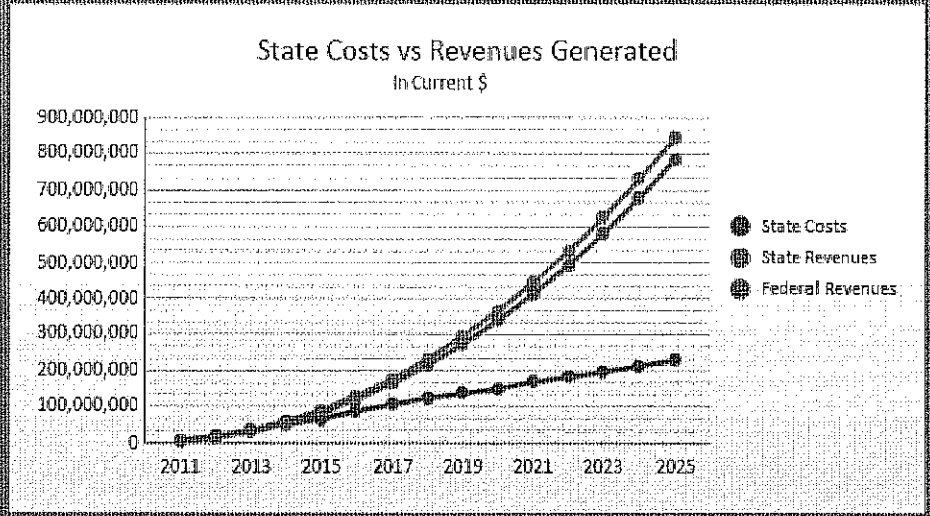

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