

DATE: August 24, 2016
TO: Toya Fick, Executive Director, Oregon Stand for Children
FROM: Andrew Dyke
SUBJECT: ECONORTHWEST ANALYSIS OF ODE GRADUATION RATE PROJECTIONS

Introduction

Overall, only 74 percent of students in Oregon’s class of 2015 graduated within four years after starting 9th grade. Although national data are not yet available for the class of 2015, in recent years, only a few states have had lower rates. In addition, the gap in graduation rates between the state’s low-income students and other students is large and persistent (see discussion below). The state’s poor standing relative to other states stands in stark contrast to the Oregon’s aspirational “40-40-20” goal, and has created significant concern among education policymakers and the broader public, leading to efforts such as the Oregonians for High School Success Measure 98.

Measure 98 would, if enacted, require school districts to dedicate funds to dropout prevention, high school career-technical education (CTE), and college-level courses for high school students. Stand for Children has engaged ECONorthwest to analyze the potential impacts of these three types of program on high school graduation rates, as well as on other outcomes such as postsecondary education and the earnings of future cohorts of Oregon high school students.

Understanding these potential impacts requires, first, characterizing how graduation rates will likely evolve in the coming biennia without significant, additional dropout prevention efforts. The remainder of this memorandum summarizes historical graduation rate data and our analysis of graduation rate projections published by Oregon Department of Education (ODE) in 2015.¹ As of August 2016, ODE had not published updated projections.

Key findings include the following:

- **Based on ODE’s earlier projections, we would expect Oregon’s on-time cohort graduation rate to rise from 74% in 2014-15 to 78% in 2029-30.**
- **The anticipated increase in graduation raets may be optimistic, as the underlying ODE projections assume a constant funding service level through 2029-30 and do not explicitly account for demographic shifts that could affect graduation rates.**

Our analysis is not intended to endorse, replace, or otherwise improve upon the published aggregate graduation rate projections. Rather, our goal with this high-level analysis is to elaborate on the original projections to provide additional context for understanding the potential impacts of Measure 98.

¹ *Report on Adequacy of Public Education Funding As Required by Article VIII, Section 8, of the Oregon Constitution: 2015-2017 Education Budget*, Joint Special Committee on Public Education Appropriation, November 2015.
<https://olis.leg.state.or.us/liz/201511/Downloads/CommitteeMeetingDocument/81305>.

ODE projections

Through the 2012-13 academic year, only students receiving a regular high school diploma “counted” as high school graduates. Since then, students who receive a regular diploma, a modified diploma, or who have earned, but not yet received, a diploma count as graduates. Our analysis, described below, adjusts the original ODE projections upwards to account for this definitional change, as well as estimates separate graduation rates for economically disadvantaged (ED) and non-economically disadvantaged (non-ED) students.

ODE’s 2015 projections of 4-year (on-time) high school cohort graduation rates were based on projections developed for the 2014 Quality Education Model Report.² These projections are, in turn, based primarily on the historical relationship between graduation rates and state education funding levels, and an assumption that then-current funding levels continue into the future. They indicate an upward trend in the cohort graduation rate, based on the original definition of graduation that counted only regular high school diplomas, from 69% in 2012-13 (the most recent data available at the time) to about 73% in 2029-30, continuing an upward trend since the first cohort graduation rate calculations for the graduating class of 2008-09. Using the current definition of on-time graduation, the projected trends translate into an increase from the 2014-15 level of 74%, to 78% in 2029-30.

Numerous other factors might lead to a divergence between these or subsequent projections and realized graduation rates in the future. These include:

- Shifts in the demographic composition of the student population and the persistent gaps in outcomes across demographic groups
- Economic conditions that affect the relative affluence of individual students and the composition of the aggregate economically disadvantaged population
- Definitional changes (e.g., in what constitutes high school graduation; in how economically disadvantaged status is determined)
- Impacts of recently implemented dropout prevention initiatives

Below, we summarize our findings, followed by a description of methods in the final section.

Findings

Figure 1 and Figure 2 display actual (2008-09 to 2014-15) and projected (2015-16 to 2029-30) four-year graduation rates using both the old definition of high school graduation (dashed lines) and the new definition that includes as high school graduates individuals who received a modified diploma and individuals who earned but did not receive a regular diploma (solid lines). The series in Figure 1 display overall graduation rates and the series in Figure 2 show graduation rates for students by economically disadvantaged status. Each of these figures

² *Quality Education Model Final Report, Volume I: Findings and Recommendations*, Quality Education Commission, August 2014. [http://www.ode.state.or.us/superintendent/priorities/final-2014-qem-report-volume-i-\(2\).pdf](http://www.ode.state.or.us/superintendent/priorities/final-2014-qem-report-volume-i-(2).pdf).

display increases of between four and five percentage points between 2014-15 and 2029-30, a modest increase of less than half a percentage point per year, generally consistent with the recent overall trend in the share of each cohort receiving a regular diploma.

In our projections, we hold the graduation gap between economically disadvantaged and non-economically disadvantaged constant at 17 percentage points, consistent with 2014-15 outcomes (Figure 2). This may, if anything, be optimistic, as the gap may have widened in recent years, as illustrated in Figure 3. Changes in the definition of high school graduation and in economically disadvantaged status determination make interpretation difficult, however.

Methods

Our analysis is comprised of three steps. First, we project 4-year cohort graduation rates through the 2029-30 academic year using the old definition of high school graduation, which counts as graduates only individuals who receive a regular diploma within four years of starting high school. Second, we disaggregate the projected trend by economically disadvantaged status to illustrate how graduation rates would evolve assuming the current outcome gap persists through 2030. Finally, we add to these rates an estimate of the share of each cohort that will earn a modified diploma or earn but not receive a regular diploma four years after starting high school.

1. Project 4-year cohort graduation rates using the original current definitions of high school graduation, consistent with the definitions used in ODE's projections:

- a. Estimate the compound annual growth rate that corresponds to the ODE graduation rate projections for 2012-13 and 2029-30.
- b. Apply the calculations in (a) to calculate the share of each cohort that earns a regular diploma in four years. This produces the increase in graduation rates of about 0.5 percentage points per year displayed in Figure 1 and Figure 2.

2. Disaggregate projections by economically disadvantaged status:

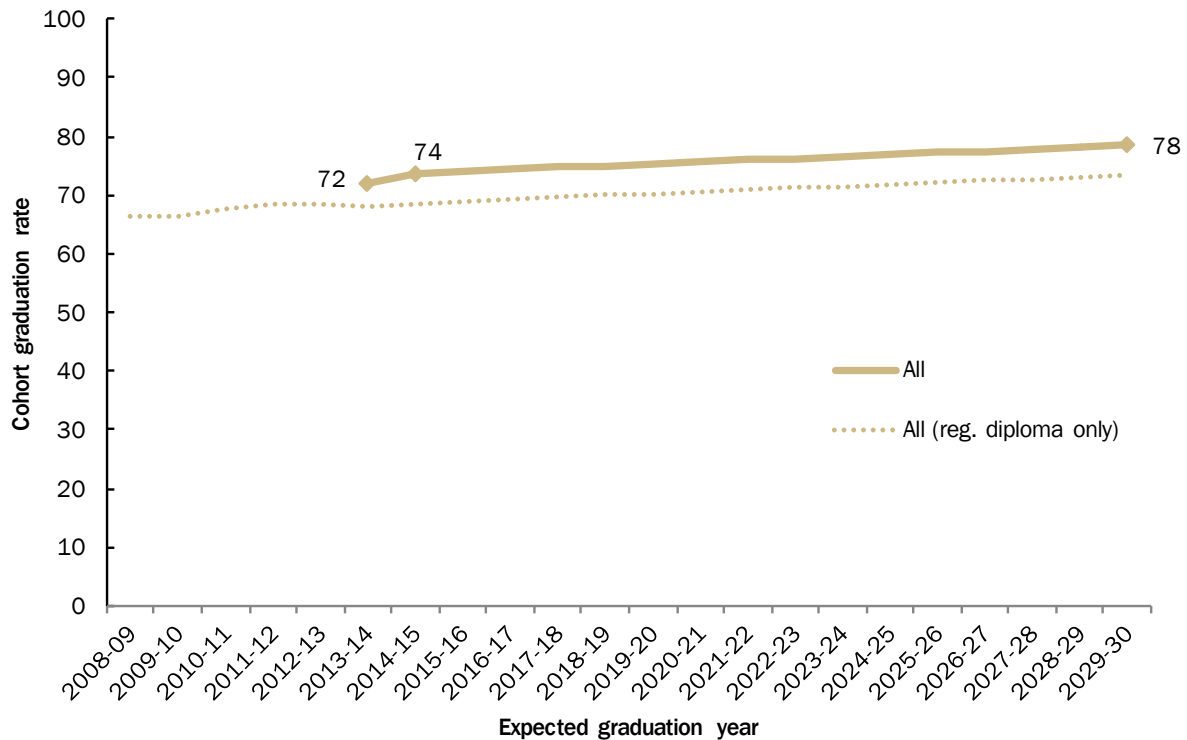
- a. We assume that the share of each graduating cohort identified as economically disadvantaged for graduating cohorts 2015-16 through 2029-30 is 56.3 percent (equal to the share of the 2014-15 graduating cohort identified as ED).
- b. We assume that the gap, for all future cohorts, in graduation rates between economically disadvantaged and non-economically disadvantaged students is 18.5 percentage points (equal to average of the gaps for the 2013-14 and 2014-15 cohorts).
- c. Using the assumptions in (a) and (b), calculate the economically disadvantaged and non-economically disadvantaged graduation rates from the results of step 1. As noted above, this assumption may be conservative.

3. Calculate final graduation rate projections by adding an estimated share of each cohort that will earn a modified diploma or earn but not receive a regular diploma four years after starting high school (this increment increased from 2013-14 and 2014-15, as the share of each cohort

earning but not receiving a diploma has increased; we have no basis currently for determining whether this trend will continue):

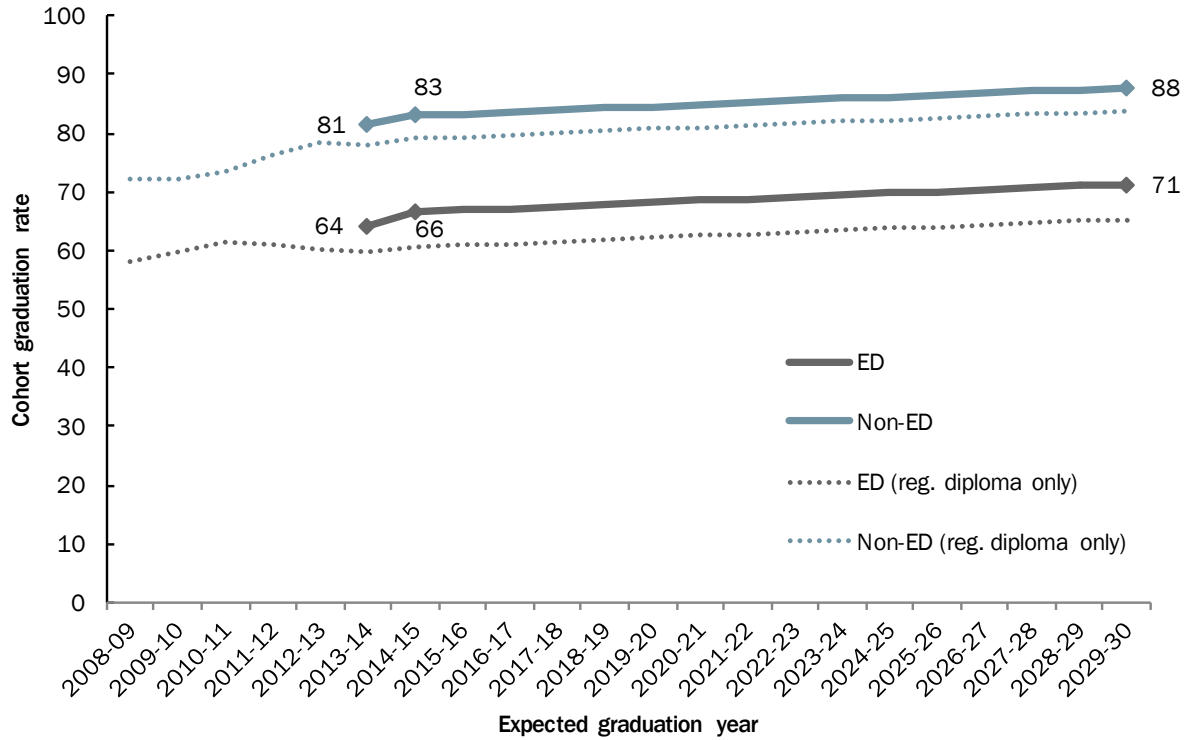
- a. Add 6.0 percentage points to the economically disadvantaged rate calculated in step 2. This is equal to the addition produced by the new categories of graduates for the 2014-15 economically disadvantaged graduating cohort (the increment for 2013-14 was 4.5 percentage points).
- b. Add 5.2 percentage points to the non-economically disadvantaged rate calculated in step 2. This is equal to the addition produced by the new categories of graduates for the 2014-15 non-economically disadvantaged graduating cohort (the increment for 2013-14 was 3.3 percentage points).
- c. Calculate the overall graduation rate implied by (a), (b), and the share of each cohort identified as economically disadvantaged in step 2.

Figure 1: Actual and projected four-year graduation rates, 2008-09 to 2029-30



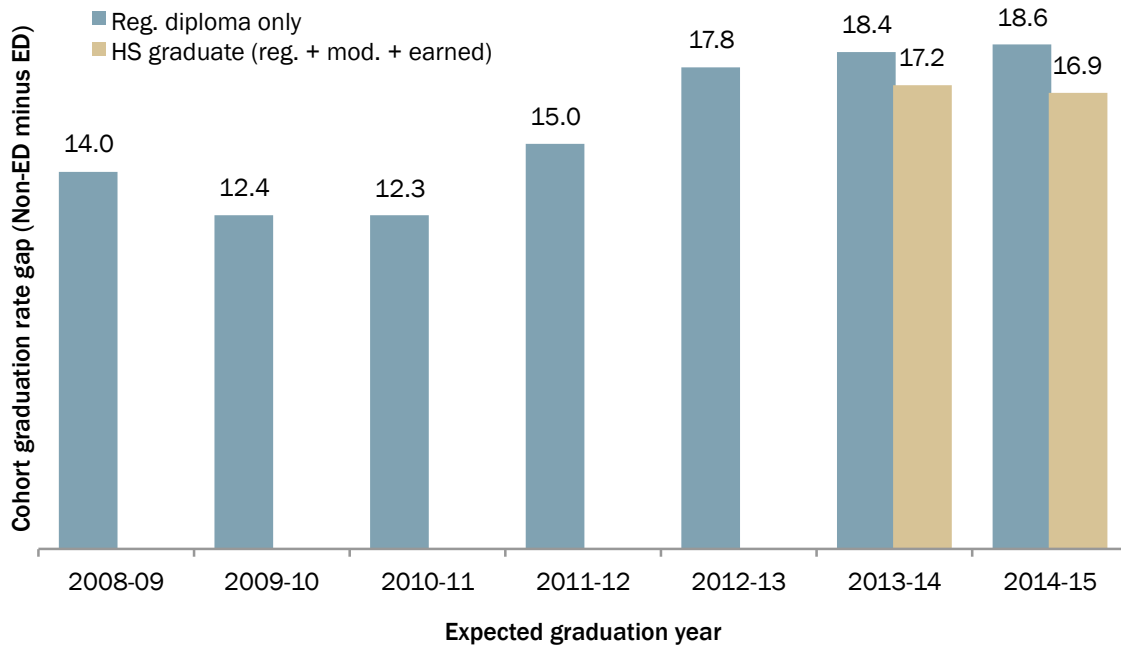
Source: ECONorthwest analysis of ODE data

Figure 2. Actual and projected four-year graduation rates, by economically disadvantaged status, 2008-09 to 2029-30



Source: ECONorthwest analysis of ODE data

Figure 3: Four-year graduation gap by economically disadvantaged status, 2008-09 to 2014-15



Source: ECONorthwest analysis of ODE data