

Improving the Productivity of Higher Education: The Whys & Some Hows



Hawaii Higher Education Summit
Honolulu, Hawaii
September 10, 2010



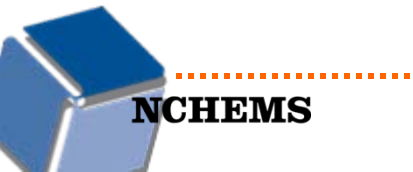
NCHEMS

National Center for Higher Education Management Systems
3035 Center Green Drive, Suite 150
Boulder, Colorado 80301

What Do We Mean By *Productivity*?

Simply put

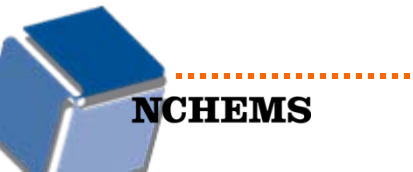
$$\text{Productivity} = \frac{\text{Outputs Produced}}{\text{Costs (Resources Utilized)}}$$



Productivity Means

- Increasing outputs
- Reducing costs

Without reducing access or quality




Productivity Does Not Mean

- Finding new revenue sources or shifting costs to students
- Becoming more selective and reducing access in the process

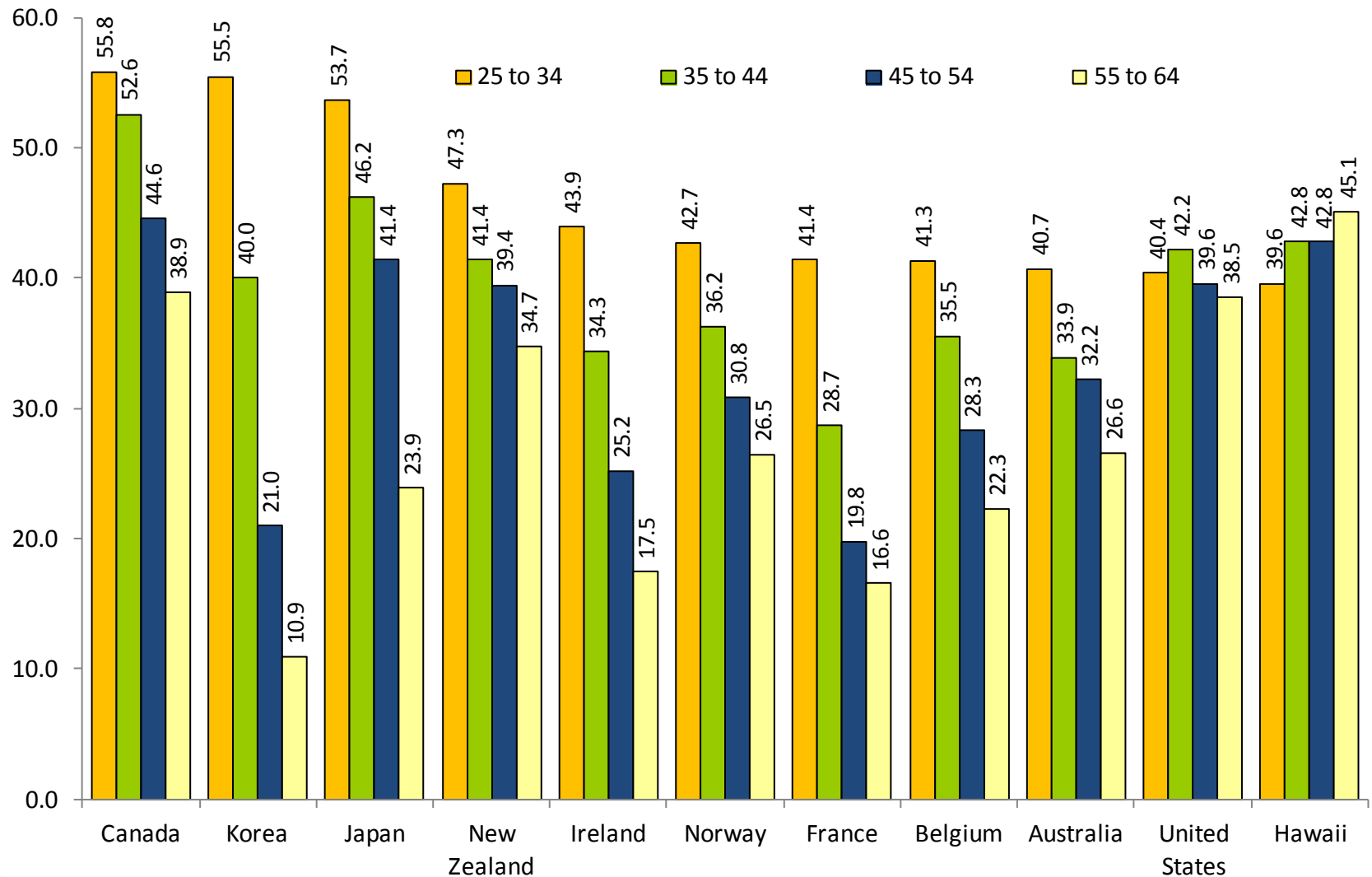


The objective is more graduates,
not a higher graduation rate.



What's the Issue? Why has Productivity
Improvement in Higher Education Become
Viewed as a National Imperative?

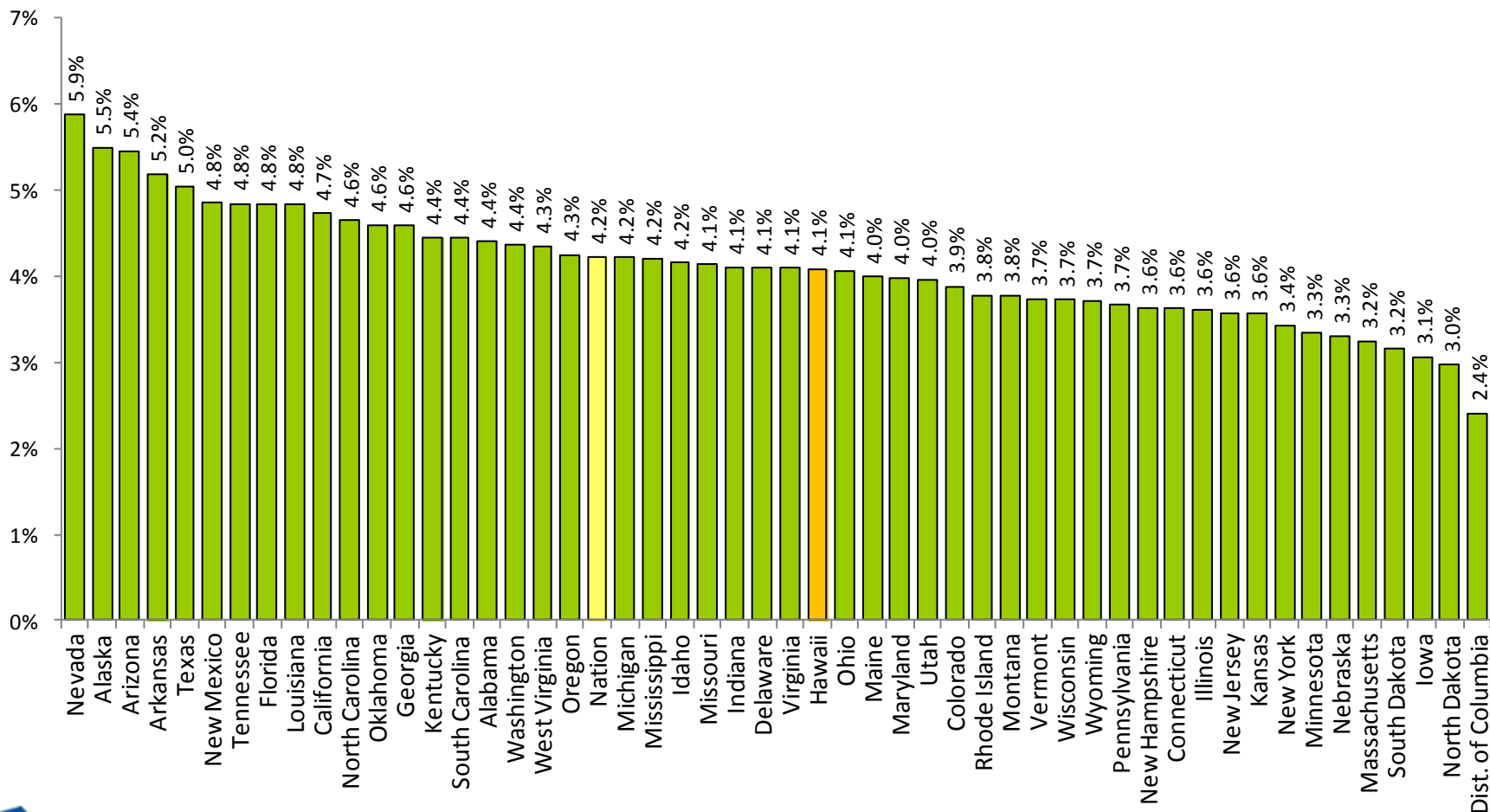
Percent of Adults with an Associate Degree or Higher by Age Group – Hawaii, U.S. & Leading OECD Countries



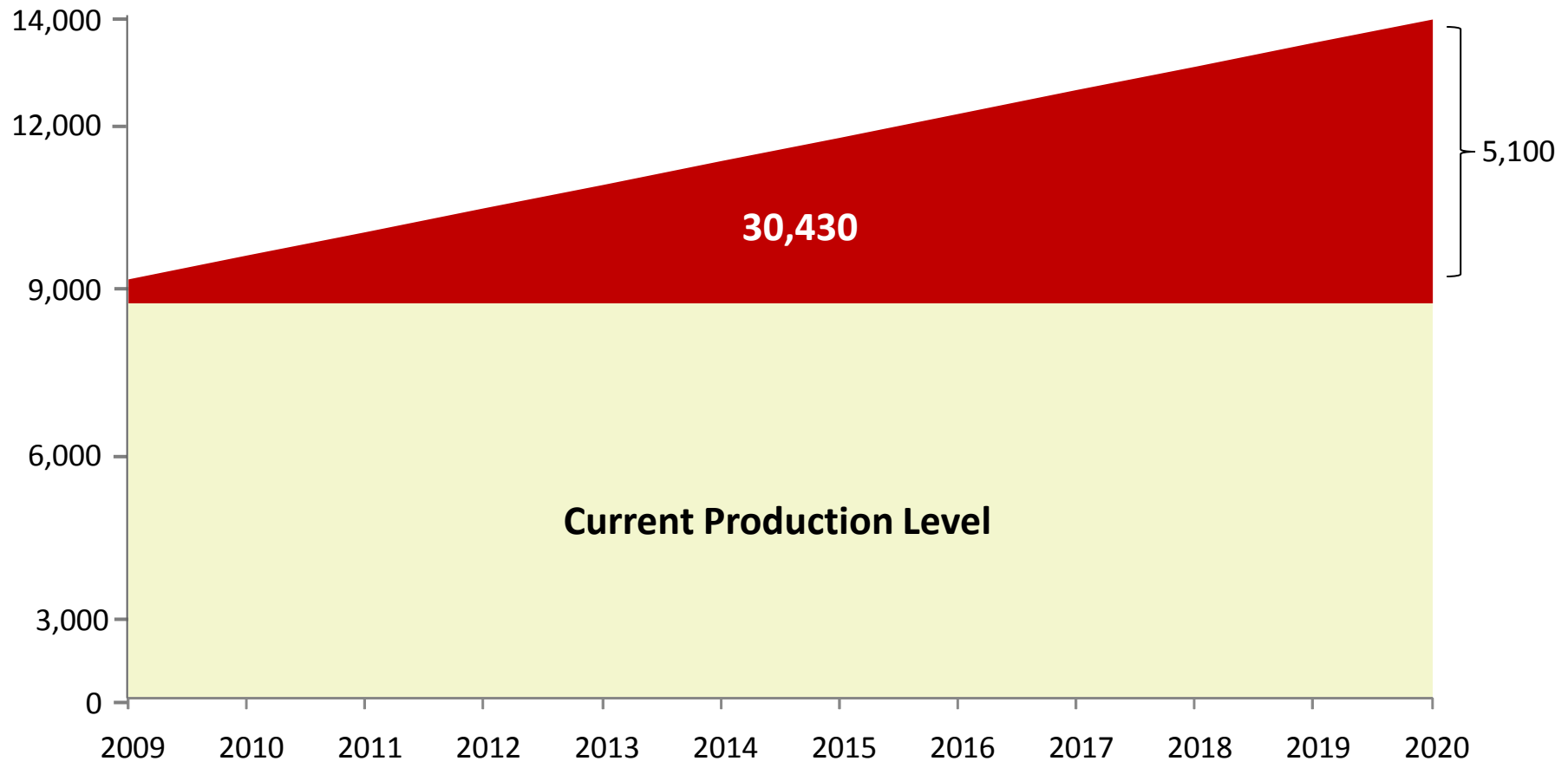
Source: OECD, Education at a Glance 2009

State Contributions to Closing the U.S. Gap of 8.2 Million Undergraduate Credentials by 2020

Average Annual Increase In Credential Production Needed (%)

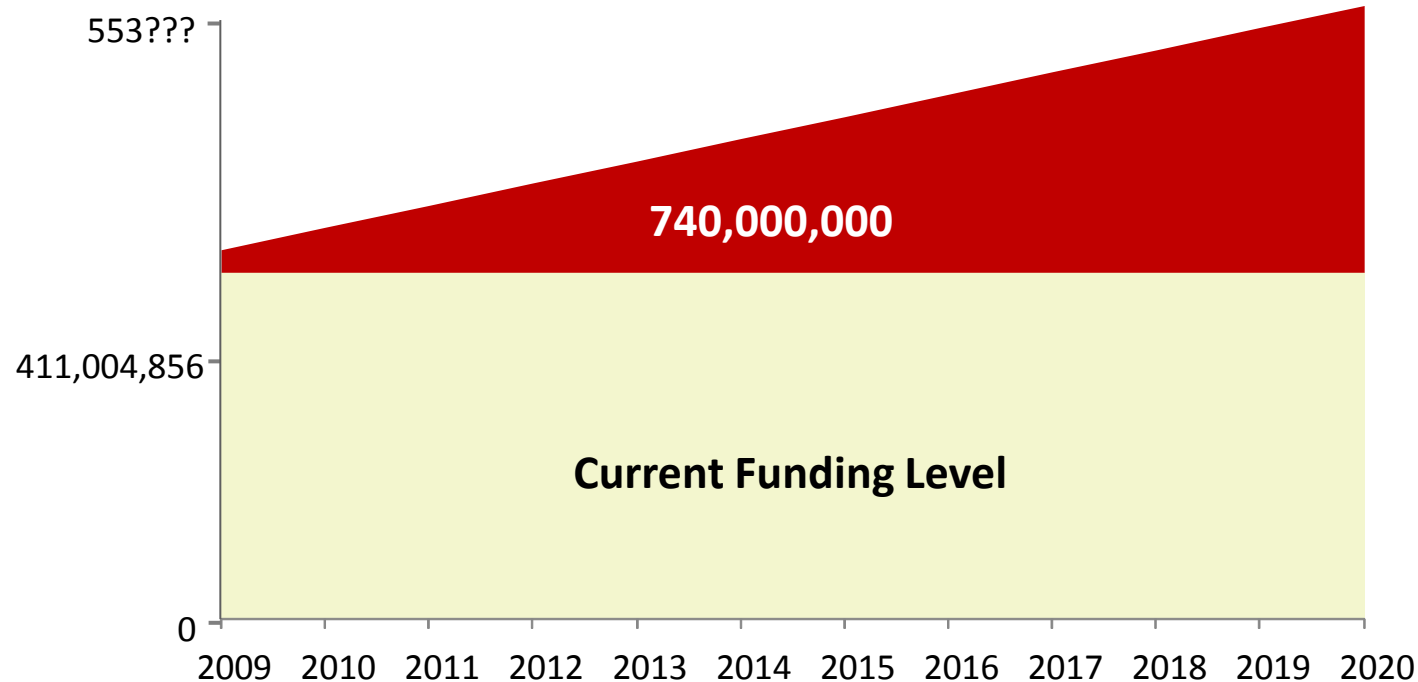


Meeting Hawaii's Share of the National Goal – A 4.1% Increase Each Year

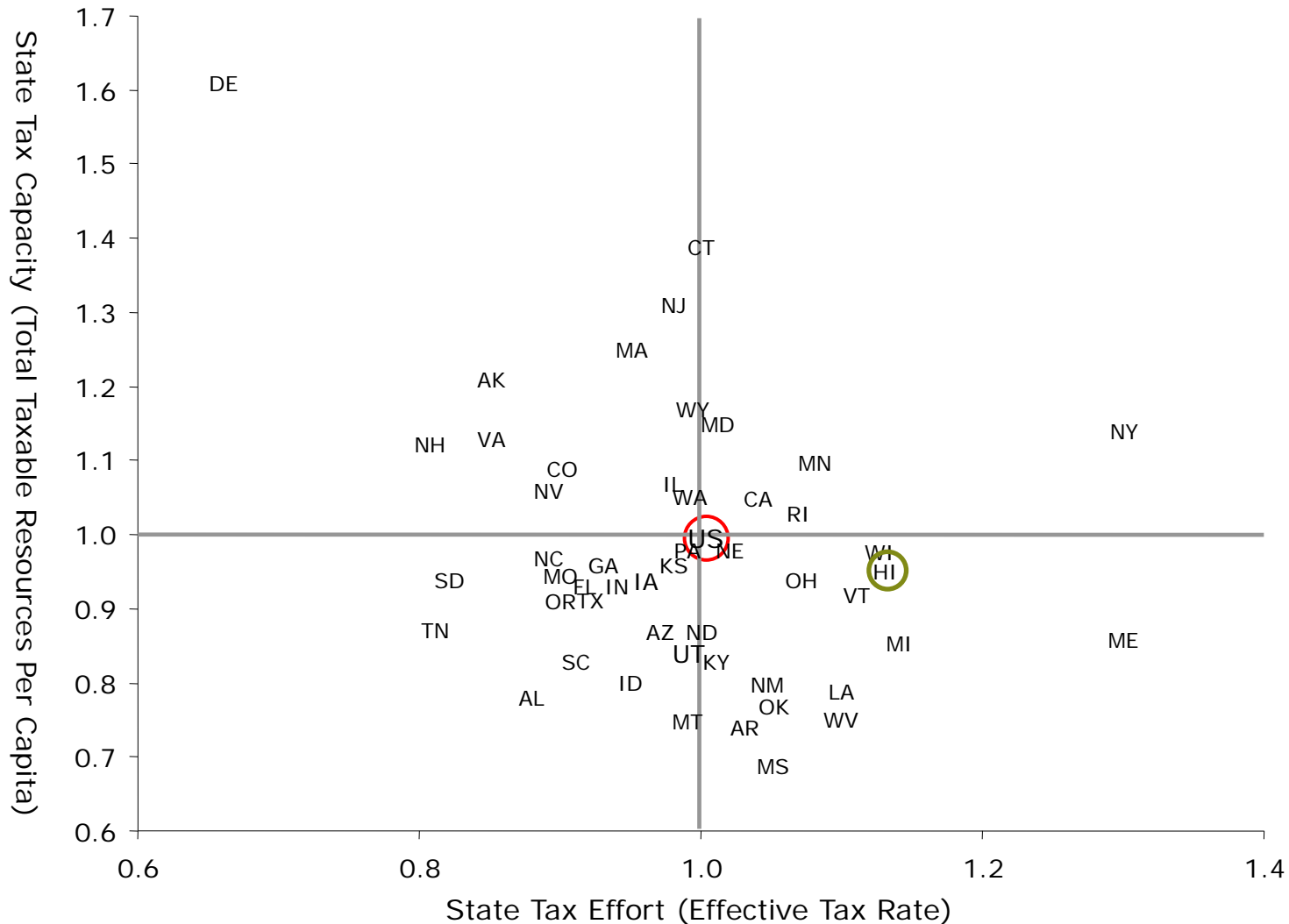


If Hawaii Were To

- Continue business as usual
- Hold tuition constant
- State funding would have to increase 34.3% over the period from now until 2020



State Tax Capacity & Effort Indexed to U.S. Average



Alternatively, if Hawaii Were To:

- Continue business as usual
- Hold state appropriations constant
- Tuition revenues would have to increase by
 - 52% at Manoa
 - 74% at Hilo and West Oahu
 - 83% at community colleges

Bottom Line

- States can't afford to lag in their stock of educational (human) capital
- States can't afford to create human capital in the amounts needed under the cost structure of business as usual



The thing that has to change is
business as usual.

Productivity has to improve.

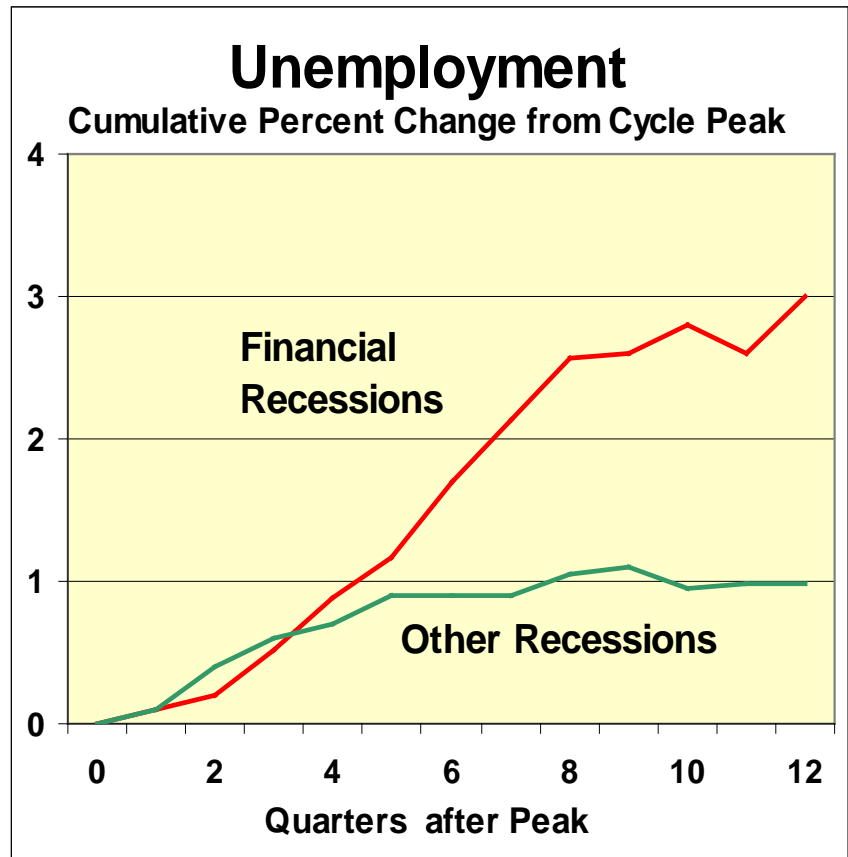
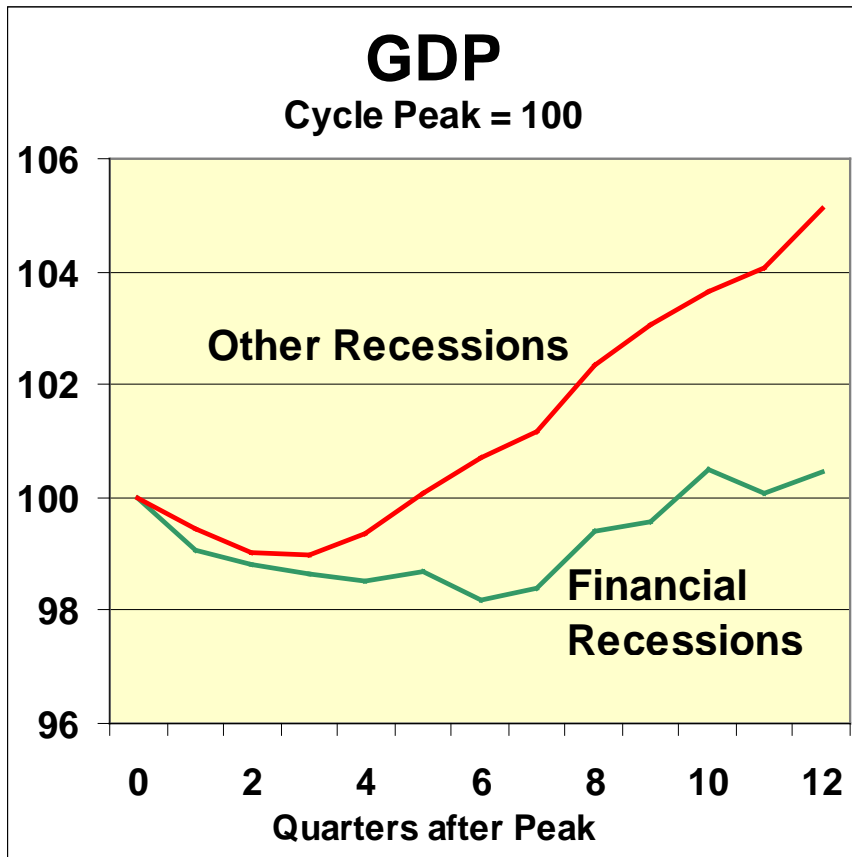
Postponing Action is Not a Solution

- The need for more graduates is not going to wait for the state economy to turn around
- Increased state funding for higher education is unlikely to be forthcoming in the foreseeable future

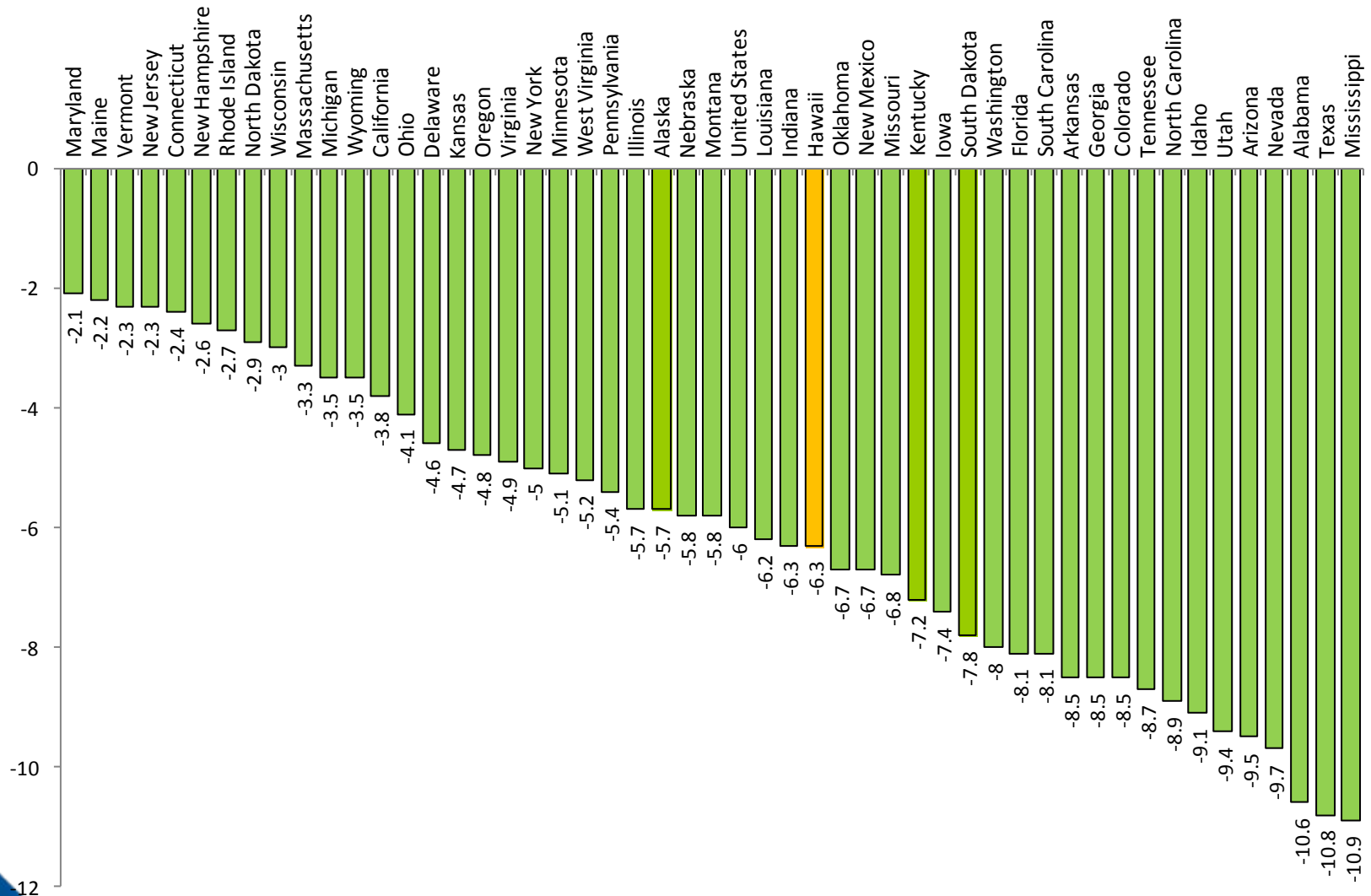
A Reality Facing Higher Education

- Employment recovery lags fiscal recovery
- State tax collections lag employment recovery
- Funding for higher education lags state tax revenues recovery

Recoveries from Financial Recessions



Projected State and Local Budget Surplus (Gap) as a Percent of Revenues, 2016

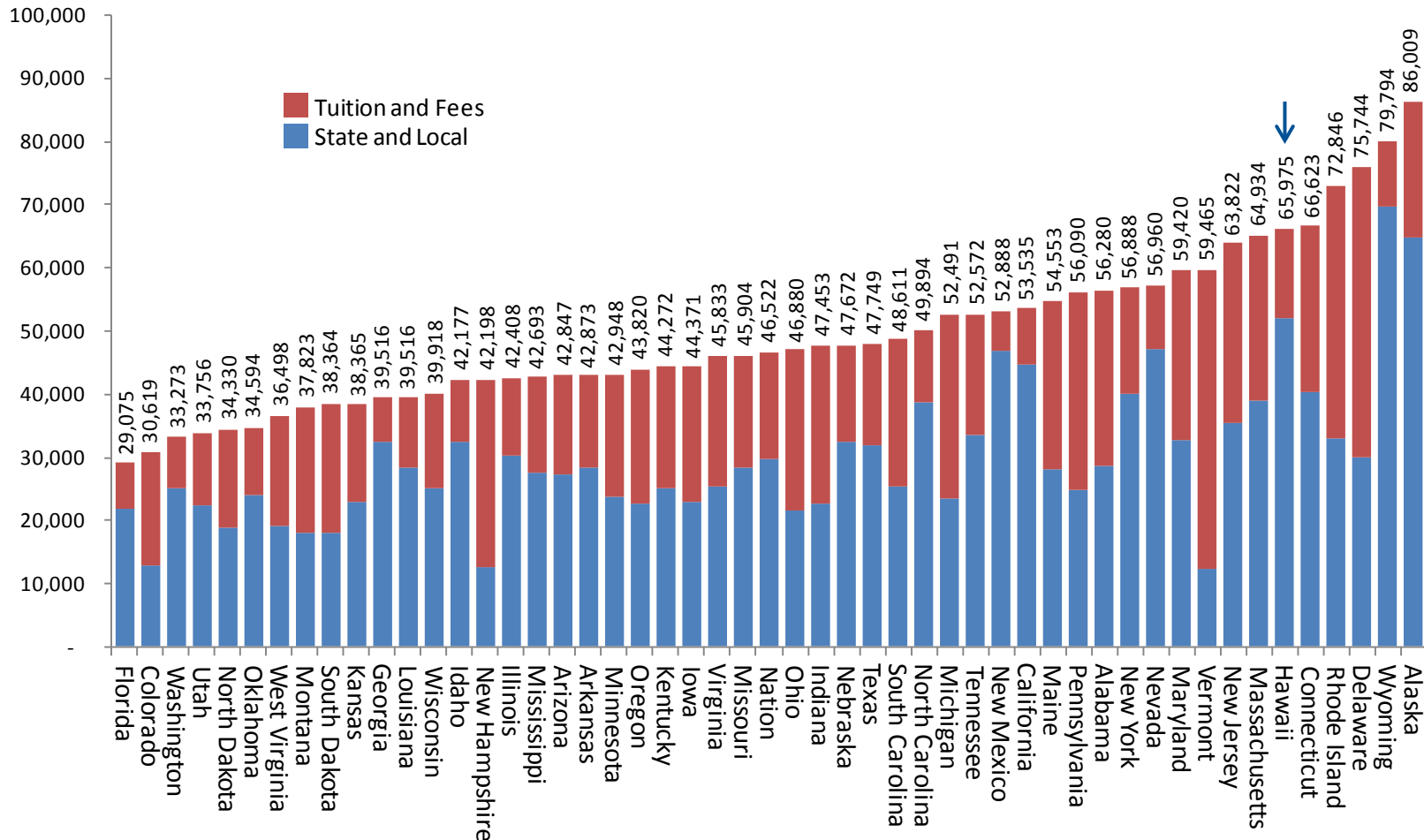


Is There Room for Productivity Improvement in Hawaii?

The evidence suggests that the
answer is
yes.

Productivity: Total Funding per Degree/Certificate

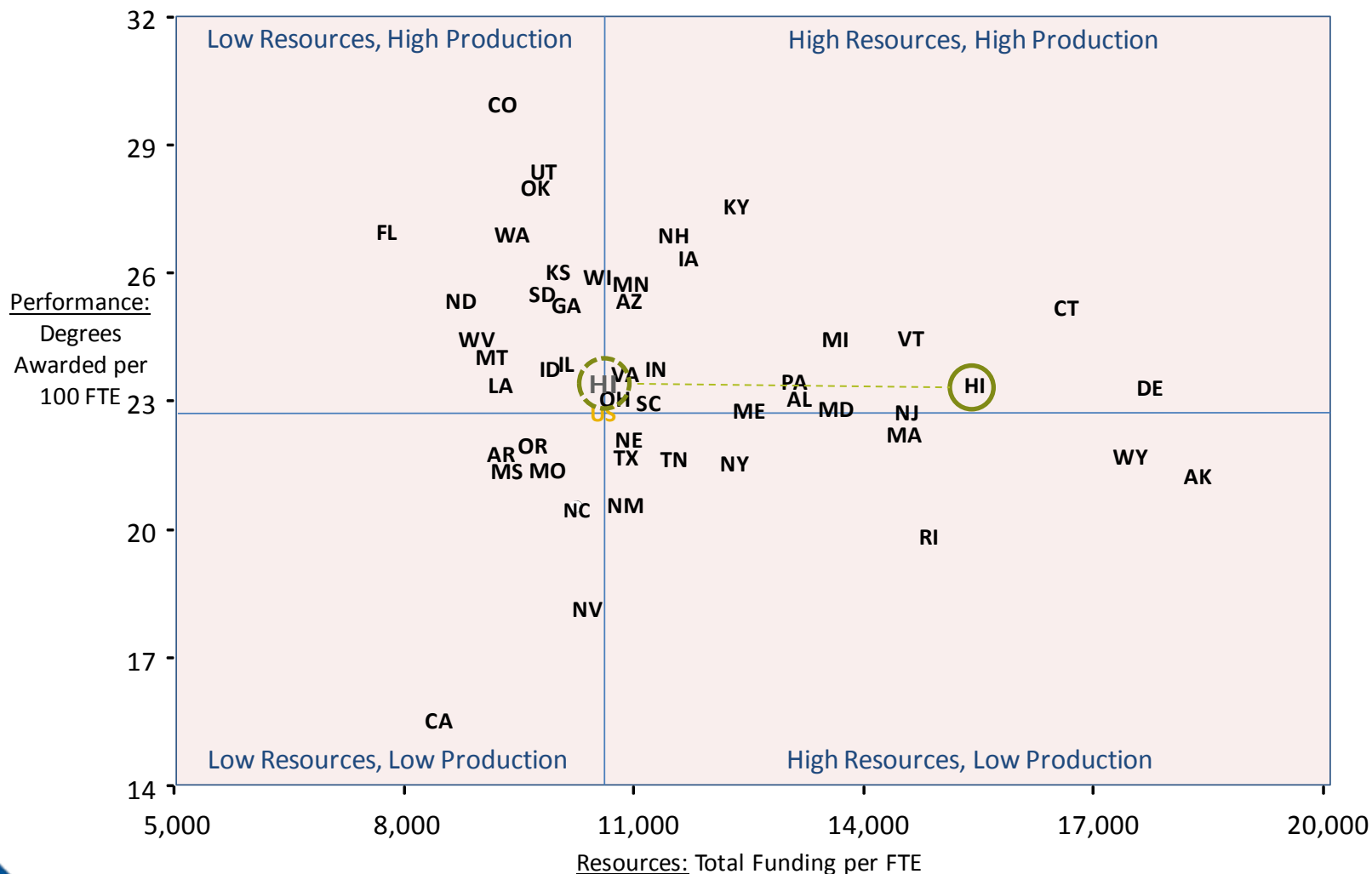
(Weighted*, 2006-2007)



Sources: SHEEO State Higher Education Finance Survey 2008; NCES, IPEDS Completions Survey; U.S. Census Bureau, American Community Survey (Public Use Microdata Samples)

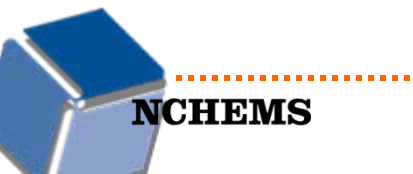
*Adjusted for value of degrees in the state employment market (median earnings by degree type and level)

Degrees & Certificates awarded per FTE vs. Total Funding per FTE (2006-2007)



Source: SHEEO State Higher Education Finance Survey 2008: NCES IPEDS Completions Survey

Approaches to Achieving Greater Productivity



Approaches to Improving Productivity

Productivity \uparrow if $\frac{\text{Outputs} \nearrow}{\text{Costs} \downarrow}$

or

Productivity \uparrow if $\frac{\text{Outputs} \uparrow}{\text{Costs} \rightarrow}$

Approaches to Achieving Greater Productivity

- Build cost-effective systems
- Change the academic production function
- Reduce demand each student places on the system
- Reduce leaks in the pipeline

Building Cost-Effective Systems

- Align institutional capacity with stated priorities
- Ensure collaboration among institutions
- Make more efficient use of existing resources – do business as usual at less cost
 - Pay attention to benefit costs
 - Reengineer administrative and support functions
 - Purchasing and contracting

Changing the Academic Production Function

- Create programs of cost-effective size (elimination in some cases, collaboration in others)
- Reengineer curricula
- Reengineer course delivery
- Emulate business models of new types of providers
 - Technology-based
 - Competency-based

Reducing Demands Each Student Places on the System

- Students come to college fully prepared (no remediation)
- Accelerated learning
 - Reduced course options – in both general and majors
 - Cohort-based block programs
- Minimize “rework”
- Improve rates of course completion
- Reduce credit hours to degree
- Encourage use of prior learning assessment/“test out” options
- Learning in the workplace/credit for experience

Reducing Leaks in the Pipeline

- Curricular Alignment
 - K-12 to Higher Ed
 - Community Colleges to 4-year
- Pay attention to student support – “case managers”
- Financial Aid incentives
- Early-warning systems
- Improved consumer information
- Re-engage adults – particularly those who have tried college and didn’t complete a program

Closing the Educational Attainment Gap in Hawaii for 25 to 34 Year Olds: The Impact of Improved Performance by 2020

Reset

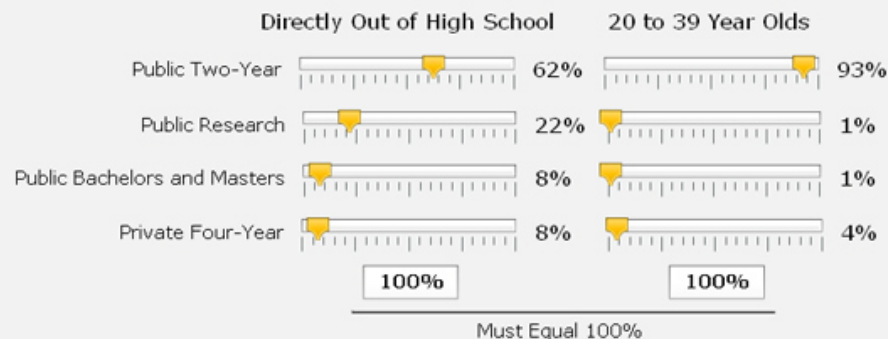
Input Rates



Throughput Rates

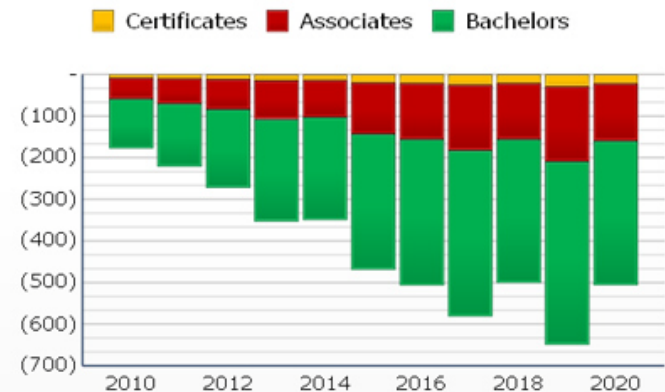


Future Enrollment Distribution of First-Time Students

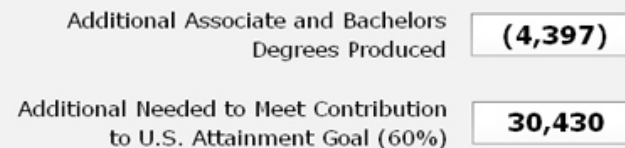


Note: Assumes Linear Progress Towards Goals.

Additional Credentials Awarded Annually by 2020



Closing the Attainment Gaps by 2020



Created by **NCHEMS**

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Input Rates

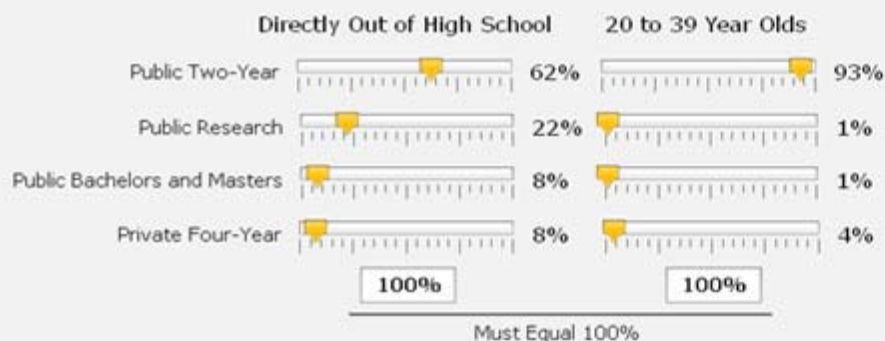


Throughput Rates

**Degrees
Awarded per
100 FTE
Undergraduates**



Future Enrollment Distribution of First-Time Students



Note: Assumes Linear Progress Towards Goals.

Best State performance (Avg. of Top 3)

Additional Credentials Awarded Annually by 2020



Closing the Attainment Gaps by 2020

Additional Associate and Bachelors
Degrees Produced

45,850

Additional Needed to Meet Contribution
to U.S. Attainment Goal (60%)

30,430

Closing the Educational Attainment Gap in Hawaii for 25 to 64 Year Olds: The Impact of Improved Performance by 2025

Reset

Input Rates

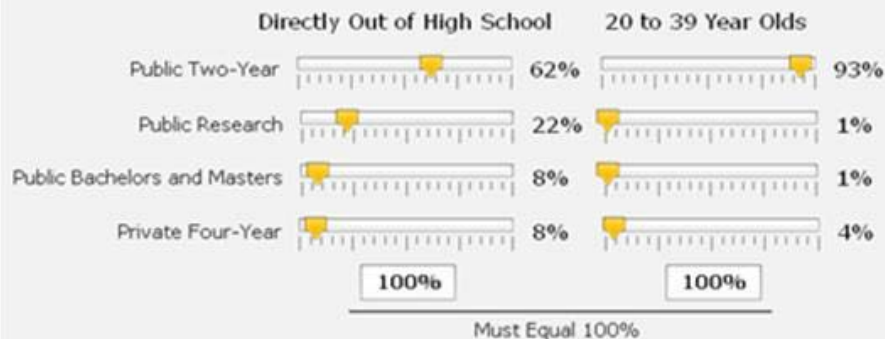


Throughput Rates

**Degrees
Awarded per
100 FTE
Undergraduates**



Future Enrollment Distribution of First-Time Students



Note: Assumes Linear Progress Towards Goals.

Best State performance (Avg. of Top 3)

Additional Credentials Awarded Annually by 2025



Closing the Attainment Gaps by 2025

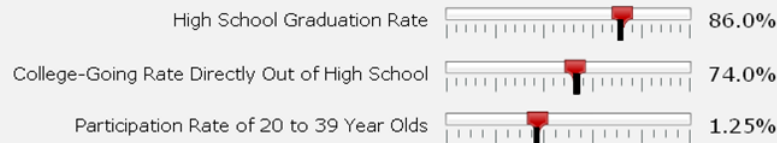
Additional Associate and Bachelors Degrees Produced **(5,770)**

Additional Needed to Meet 55% Attainment Goal **54,632**

Closing the Educational Attainment Gap in Hawaii for 25 to 64 Year Olds: The Impact of Improved Performance by 2025

Reset

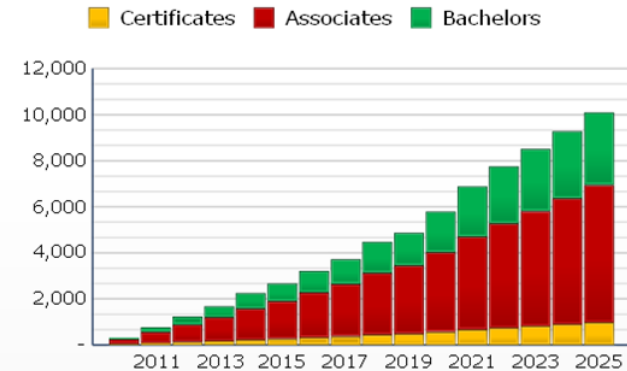
Input Rates



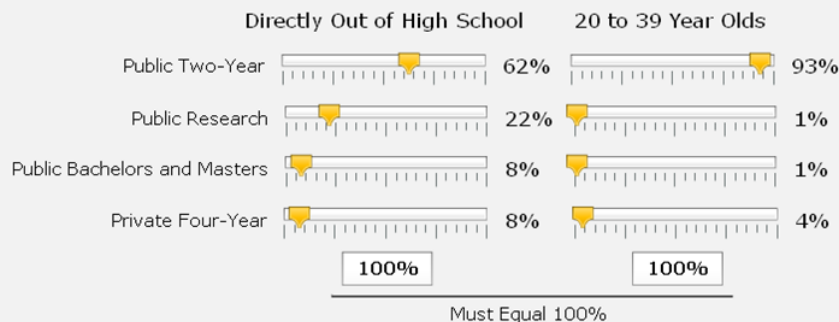
Throughput Rates



Additional Credentials Awarded Annually by 2025



Future Enrollment Distribution of First-Time Students



Closing the Attainment Gaps by 2025

Additional Associate and Bachelors Degrees Produced	66,355
Additional Needed to Meet 55% Attainment Goal	54,632

Note: Assumes Linear Progress Towards Goals.

■ Best State performance (Avg. of Top 3)

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The Good News:

Collectively, we know how to do this

- The issue is one of will, not an absence of knowledge
- Can be done by working smarter, not harder

