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PROGRESS REPORT: THE CONTEXT AND CHARACTER OF HIGHER EDUCATION IN WASHINGTON STATE

BACKGROUND FOR THE FUNDING AND ENROLLMENT ANALYSIS

TO THE WASHINGTON LEARNS HIGHER EDUCATION ADVISORY COMMITTEE

DRAFT

FEBRUARY 21, 2006

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www.nored.us

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PROGRESS REPORT: THE CONTEXT AND CHARACTER OF HIGHER EDUCATION IN WASHINGTON STATE

BACKGROUND FOR THE ANALYSIS

FEBRUARY 21, 2006

Introduction

This progress report summarizes the results to date of an effort to assemble pertinent contemporary data on Washington's higher education funding and enrollment policies and establish an information base for the analysis. It brings together the findings of a reasonably comprehensive literature review organized around the major themes of the study.

It is a work in progress but not an end in itself. Its purpose is to help frame and focus the study. "Impressions" may be a good word at this juncture. The material comes together a little in the manner of pointillistic impressionism, although not always as complete as the critical viewer might like.

Some things are pretty clear. Washingtonians treasure their colleges and universities. In one recent public opinion poll, 84% expressed confidence in their public colleges and universities and believed these institutions make significant contributions to the state's economy.[1] People in this state are well out in front of the nation (76%) in this assertion, as shown by a national poll using the same questions.

Other indicators speak to the importance of higher education in differenr ways. Washington ranks second in the nation on the 2002 New Economy Index, surpassed only by Massachusetts in the scoring. The New Economy Index ranks states on the strength of indicators considered important to effective competition in the new economic setting. Among the features that make up the overall score are employment in information technology jobs (Washington ranks 2), percent of population online (rank: 7), utilization of digital technologies in state government (rank: 2), Workforce education (education attainment: advanced degrees, bachelor's and associate degrees in the workforce rank: 11), and scientists and engineers as a percentage of the workforce (rank: 11).

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1 American Council on Education 2002 Washington State poll, cited in Washington Learns report, *Public Attitudes and Concerns About Education*, November 2005.

These standings apply to the 2002 Index, the most recent available. They already are four years old, a period that may be equal to light years in the setting of aggressive global competitiveness that characterizes the world of today.

Other positive signs can be mentioned. Although the Census data, also usually dated, do not establish where the education was acquired, Washington ranks fifth among the 15 WICHE[2] states in high school graduates as a percentage of the population age 25 and over (89.7%); it is well above the national average of 83.6% and the WICHE state average of 83.4% in this regard.

With respect to the percentage that has completed a bachelor's degree or more, at 30.2% the state ranks second only to Colorado (34.7%), and above California (29.1%) among the western states. The national average is 26.5%; the WICHE state average is 28.2%.[3]

According to the National Center for Public Policy and Higher Education's [NCPPHE] 2004 national higher education report card, *Measuring Up*, Washington does well on three dimensions: College Preparation (B-), College Participation (an A- grade; the state does well with its four-year institution retention and completion rates), and the Social Benefits of an educated populace (also an A- grade; a high proportion of Washington residents have a bachelor's or higher degree).[4]

The state does less well on two others. It gets a C grade for College Participation (proportion of working-age adults enrolled in college-level education), and a failing grade, an F, for College Affordability (share of average family income required for a college education). According to the Center, "Over the last decade, the share of income needed to pay for college expenses after financial aid has increased from 19% to 27% at [Washington] community colleges and from 20% to 31% at public four-year institutions."[5] The failing grade for Affordability drove Washington's 2004 GPA to 1.9, or slightly less than a C.[6]

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2 Acronyms are endemic to American higher education. This one refers to the Western Interstate Commission on Higher Education.

3 WICHE, Policy Indicators for the WICHE States.

4 Washington is a net importer state. According to Census data, for the five-year period, 75,330 more people came into the state than left, ranking it 10th in the nation in terms of net migration. In terms of college-bound people, however, it is a net exporter. In 2002, 2909 more college-bound people left Washington than came in. The state ranks well below the national average and 45th among the states on this measure. See: www.higheredinfo.org, "Import/Export Ratio of College-Going Students."

5 2004 Washington Report, p. 8.

6 The NCPPHE does not calculate a GPA. The Washington GPA described here was calculated on the basis of the following grade values, with the total divided by 5: A = 4.0; A- = 3.75; B+ = 3.25; B = 3.0; B- = 2.75; C+ = 2.25; C = 2.0; C- = 1.75; D+ = 1.25; D = 1.0; D- = .75; F = 0. The reason that the National Center does not use a cumulative GPA is because the categories may

Equally as troubling are reports that employers seeking people with bachelors and graduate degrees have difficulty finding qualified job applicants (67%). The problem is not limited to people with credentials at this level. The issue is pervasive. The percentage reporting difficulty finding employees with bachelors and advanced degrees is about the same as the percentage of employers encountering difficulty finding people with vocational associate degrees (68%). Further down the credential ladder, finding people with vocational certificates (53%) and those some college but not a certificate or degree (35%) also is problematic.[7]

While Americans and Washingtonians alike hold their postsecondary institutions in very high regard, they also are concerned about affordability, the price of a college degree, and worry increasingly that it is rising out of reach.[8]

Washington always has been a pioneering American state in the development of social policy and management systems. Thus, the state has a lot of experience in higher education policy development and experimentation, and it has employed, and sometimes moved beyond, many of the funding, planning, and management techniques being discussed or still in place in other states. Formula funding, budget and cost analysis methods, performance and accountability programs, enrollment projection models, and many others all have places in this state's modern history. As it revisits some of these it also may need to re-start its social pioneering heritage in search of new or better ways of doing things.

A review of some of the data and the conditions that form the context of the funding and capacity analyses is a useful way to begin the study. The purposes are not to close the door on any future potential in a sort of "been there; done that" statement of finality, or to unduly defend what is going on now; rather this information is presented in this paper as a foundation on which new solutions can be sought and built, using what works and discarding what does not, and, in any case, not expending time and effort on travels to vistas already seen. It not only is a good place to begin, it is essential.

The Context: Higher Education Funding

Higher education funding is a perpetual Issue in Washington, now and forever it seems, with concerns waxing and waning as revenue cycles ebb and flow, usually as demographic bulges in the college pertinent age groups change

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not be equivalent in value. This also may be an argument against the use of a cumulative GPA to measure college work, usually composed of courses of disparate difficulty.

7 Washington Workforce Training and Education Coordinating Board 2003 employers poll, cited *ibid*.

8 *ibid*. They also sometimes overestimate the price of a college degree, but this is true of respondents in other states as well.

and advance through the population.[9] Notably, more than 30 years ago, one of the first reports of the erstwhile Council on Higher Education [CHE, now HECB], *Financing Higher Education in Washington* (1972), opened with this recommendation: "Increased funding will be required in the coming decade to accommodate the demands of increasing enrollments of college age and older students." This was barely three years after the Boeing Bust of 1969, and barely two years after this, the state's first higher education coordinating board, was established.

Sometimes, though rarely, there seems to be enough funding for higher education in Washington, but most times the impressions have been otherwise. A broader perspective may help. Compared with the other 15 WICHE or western states, the five and ten year changes in appropriations of state tax funds for operating expenses in higher education, and the FY 2005 amounts, are those shown on the following table, which ranks these states by the ten year percent change:[10]

9 The structure of this group is changing, of course, as people other than the age 17-22 sector continue their studies to the graduate and professional levels, and as others return for more college work in response to workforce requirements.

10 Peer institutions are used frequently for comparison purposes (e.g., tuition and fees, unit costs and expenditures, faculty salaries, etc.) in Washington. There does not appear to be a common set of states used for comparisons at the macro level. Generally the state utilizes national comparisons (all 50 states) and the western or WICHE states for this purpose. The western states, or WICHE states are the preferred set in this report to help describe higher education conditions in Washington.

Appropriations of State Tax Funds for Operating Expenses of Higher Education in the Fifteen WICHE States
Ranked by 10 Year % Change
Data Source: Grapevine

State	FY 05 Appropriations (in $1,000s)	% Change FY00 to FY 05	% Change FY95 to FY05	Rank
Nevada	506,746	65.6	160.0	1
California	9,091,424	18.0	87.9	2
Utah	625,593	21.8	58.3	3
New Mexico	677,935	24.6	55.0	4
Wyoming	211,924	51.7	53.9	5
Washington	**1,427,598**	**15.4**	**51.4**	**6**
South Dakota	162,306	24.5	43.8	7
Idaho	322,565	15.5	41.7	8
North Dakota	200,430	8.5	38.3	9
Arizona	913,918	5.6	37.6	10
Alaska	233,381	32.3	36.0	11
Oregon	586,552	-7.3	34.7	12
Montana	152,582	10.2	23.8	13
Colorado	591,511	-17.8	8.7	14
Hawaii	409,727	19.8	7.1	15

Most of the change occurred during the ten-year period, 1995-2005. The last five years, to 2005, have displayed a lesser rate of growth. Viewed from some other angles, the western state rankings on 2005 tax appropriations for higher education per capita and per $1000 of personal income are those shown on the next table.

State Ranking on FY 2005 State Tax Appropriations for Higher Education Per Capita and Per $1000 of Personal Income.
WICHE States Ranked by Per $1000 Personal Income
Data Source: Grapevine

Rank	State	FY05 Appropriations	Per $1000 Personal Income
1	New Mexico	677,935	13.42
2	Wyoming	211,924	12.45
3	North Dakota	200,430	10.57
4	Alaska	233,381	10.37
5	Hawaii	409,727	10.12
6	Utah	625,593	10.08
7	Idaho	322,565	8.80
8	California	9,091,424	7.30
9	South Dakota	162,306	7.16
10	**Washington**	**1,427,598**	**6.72**
11	Nevada	506,746	6.70
12	Montana	152,582	6.14
13	Arizona	913,918	5.76
14	Oregon	586,552	5.48
15	Colorado	591,511	3.59

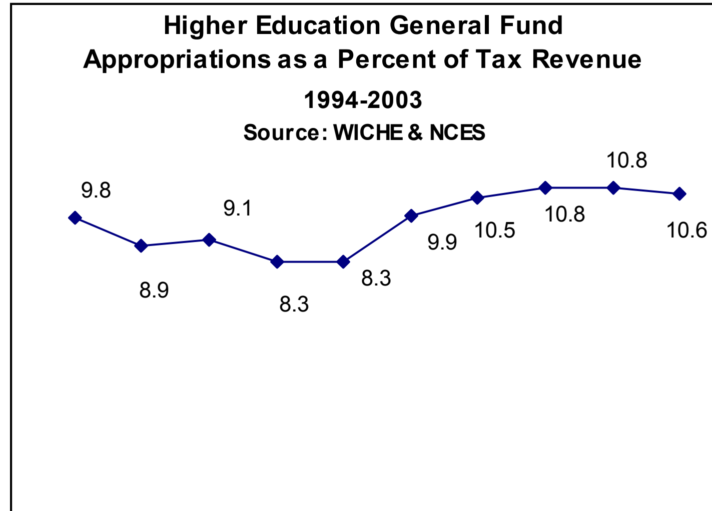
The state ranks 10th among the group of 15 on this measure. Washington also ranks 26th nationally on this indicator. It rises to 9th regionally and 20th nationally, however, when ranked on a per capita appropriations basis; the order is as follows:

State Ranking on FY 2005 State Tax Appropriations for Higher Education
WICHE States Per Capita
Data Source: Grapevine

Rank	State	FY05 Appropriations	Per Capita
1	Wyoming	211,924	418.38
2	New Mexico	677,935	356.19
3	Alaska	233,381	356.07
4	Hawaii	409,727	324.45
5	North Dakota	200,430	315.95
6	Utah	625,593	261.86
7	California	9,091,424	253.29
8	Idaho	322,565	231.52
9	**Washington**	**1,427,598**	**230.12**
10	Nevada	506,746	217.04
11	South Dakota	162,306	210.55
12	Montana	152,582	164.62
13	Oregon	586,552	163.18
14	Arizona	913,918	159.11
15	Colorado	591,511	128.55

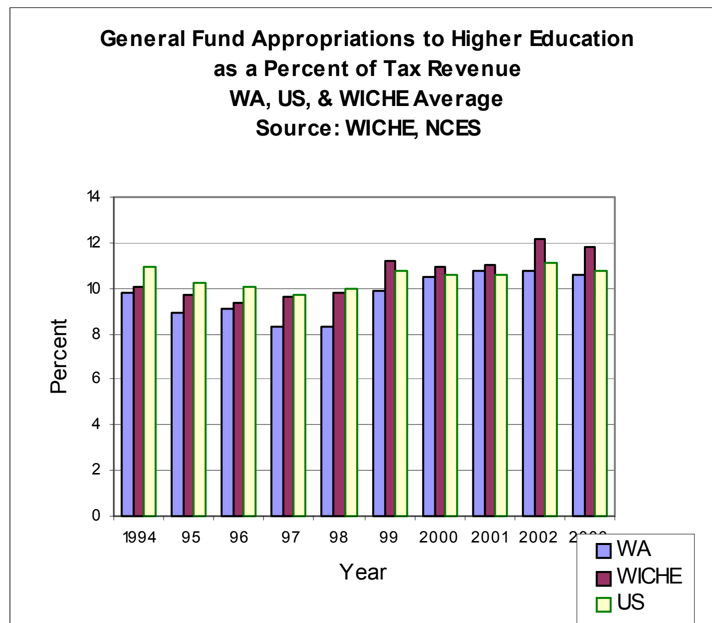
According to WICHE/NCES data, the annual shares of General Fund appropriations to higher education as a percent of tax revenue since 1994 have varied in Washington but were generally greater during the years 1999-2003 than they were in five preceding years going back to1994.

Viewed over a ten-year period, the curve describing higher education General Fund appropriations as a percent of tax revenues is slightly up, following a dip that persisted during the 1994-1998 period. Return to parity did not occur until the following year.



In 2003, the last year on the graph, the higher education share was up about 0.8 percent from the base year, but it also was down 0.2 percent from the previous (2002) year. According to the HECB, higher education appropriations for the 2003-05 biennium amounted to 11.6 percent.[11] This would represent an upturn. It is not certain at this point, however, that the calculations behind the two data sets, HECB and WICHE, are the same.

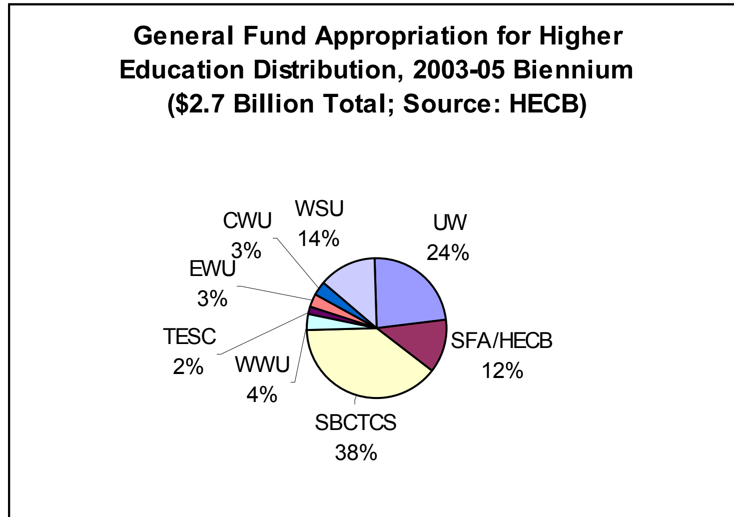
Washington's annual higher education shares of General Fund tax revenues compare with the WICHE state and national averages at the levels for the years depicted on the next graph:



11 "Higher Education Finances," Part 4 of the HECB Fact Book, p. 65.

For the most part the state has trailed both the US and WICHE averages in higher education appropriations as a percent of tax revenue, nearing parity in 2000 and 2001 but failing to keep pace in 2002 and 2003.

For a brief look at how higher education funds are apportioned, according to HECB data, the 2003-05 Biennium General Fund higher education appropriations were distributed within the system as follows:[12]



Washington ranks seventh among the 15 western states, and just above the national average, in higher education appropriates per FTE. The following table compares the western states on this measure:

Appropriations for Public Higher Education Per FTE
Among the Western States and US Average
FY 2004
Source: SHEEO/SHEF

higheredinfo.org

Rank	State	Appropriations Per FTE
1	Wyoming	$10,725
2	Nevada	$7,917
3	Hawaii	$7,834
4	California	$6,521
5	Idaho	$6,157
6	Arizona	$5,898
7	**Washington**	**$5,637**
8	**U.S. Average**	**$5,308**

12 *Idem*. p. 66.

9	New Mexico	$4,996
10	Utah	$4,976
11	Alaska	$4,595
12	South Dakota	$4,547
13	North Dakota	$4,464
14	Montana	$4,128
15	Oregon	$3,962
16	Colorado	$3,011

Washington's ranking changes dramatically when tuition is factored into the equation and the subject becomes 'total revenues;' it moves from 7th down to 13th within the group, and well below the national average. This suggests that earlier references to price increases notwithstanding, tuition may not carry the same weight in this as in other states in terms of overall funding. The states rank on this measure as follows:

Total Revenues for Public Higher Education Per FTE
Among the Western States and US Average
FY 2004

Source: SHEEO/DHEF

higheredinfo.org

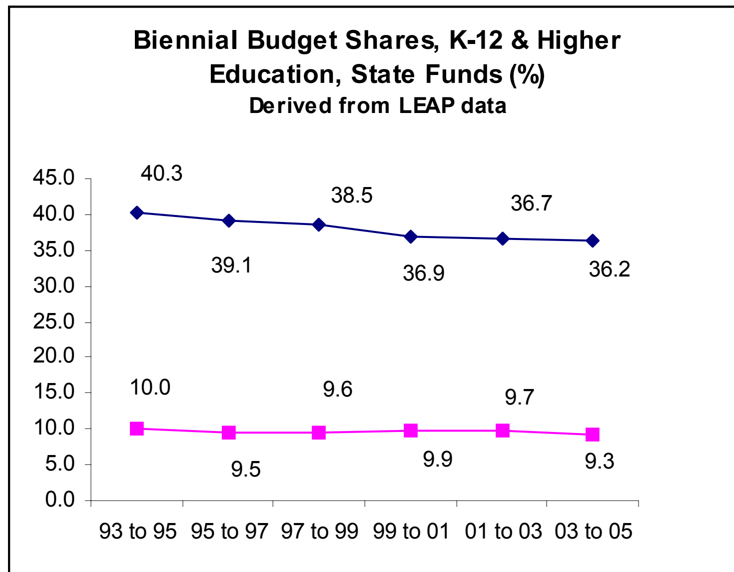
Rank	State	Appropriations Per FTE
1	Wyoming	$13,857
2	Nevada	$10,154
3	Oregon	$9,808
4	Hawaii	$9,763
5	South Dakota	$9,251
6	**U.S. Average**	**$8,908**
7	Arizona	$8,706
8	Montana	$8,436
9	California	$8,131
10	Idaho	$8,088
11	Utah	$7,497
12	North Dakota	$7,489
13	**Washington**	**$7,445**

14	Colorado	$7,385
15	New Mexico	$6,954
16	Alaska	$5,992

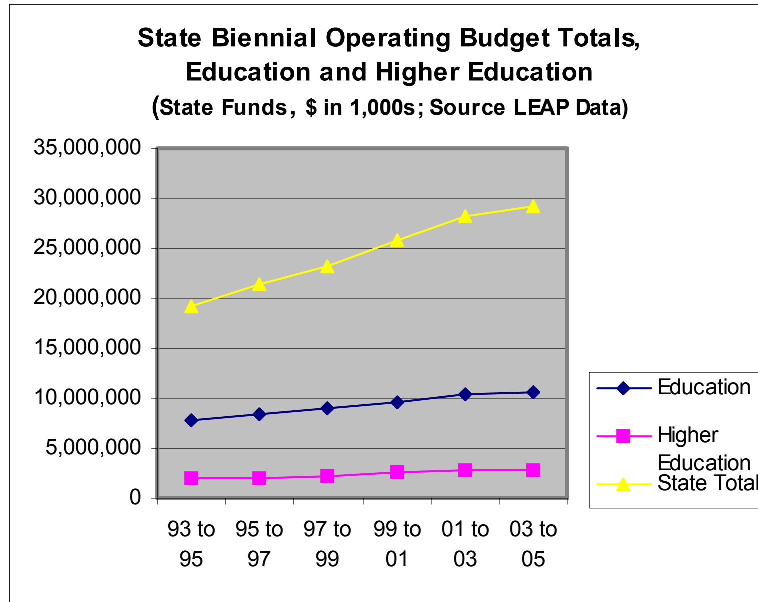
Funding stability is an important consideration for many in higher education in Washington and elsewhere. "Stability" in this context appears to connote steadiness or constancy (although in an expanding economic setting, stability might assume a more negative tone, e.g., stationary, stagnant).

Theoretically at least, public K-12 education in Washington might be expected to be an example of an education program that entails "stable" funding. The Constitution describes the education of children as the state's "paramount duty," and court decisions and legislation have mandated a state-funded basic education for all children. Some might even argue that this comes close to an entitlement.

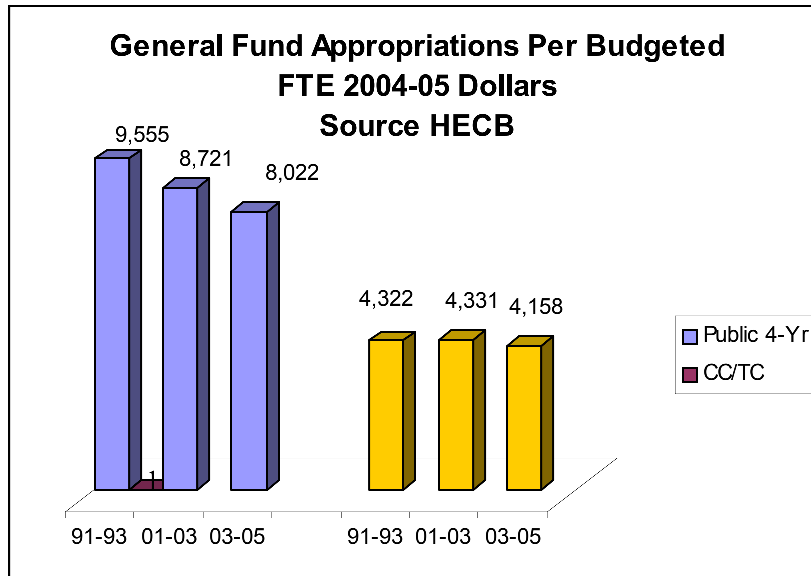
The graphs on the following chart suggest that in terms of stability, there may be less in both sectors than meets the eye; they suggest that K-12 has not been particularly immune from a decline in funding share. Its portion of state funds (the top curve) has dropped about ten percent during the past decade, compared with about seven percent for higher education (bottom curve).



Moreover, as suggested by the next graph, compared to increases in the state funds' share of the biennial operating budget, the curves depicting funding for the two education sectors have remained relatively parallel but have not retained parity with budget growth overall. This may suggest that K-12 funding may be as susceptible to funding cycles as the presumably more discretionary higher education funding.



Adjusted for inflation, General Fund appropriations per FTE in higher education are down from 1991-93, again used as a base year here. For the two major higher education institutional components, public four-year institutions and community/technical colleges, the differences are demonstrated on the following HECB bar graphs. While the chart does not display funding fluctuations during the interval (1991-2001), in both cases the unit funding is down from the base year. In the case of the public four-years the decline is 16%. The drop in the case of the community and technical colleges is about four percent.



Tuition represents only one of higher education's foremost fund sources, but it is one of the two major sources of unrestricted funding available to public institutions. In the public sector, appropriations represent the other. Started

differently, appropriations and tuition comprise two of higher education's main funding sources. Because of this, a few seemingly obstinate realities repeatedly confront higher education funding both in Washington and nationally: Patrick M. Callan of the NCPPHE has observed that:[13]

- When revenue shortfalls are distributed among state services, perceptions are that higher education is likely to absorb larger cuts than other government sectors;
- When higher education faces cuts in state funding, the state and higher education institutions are likely to shift the shortfalls onto students and their families via price increases; and
- During a recession, states are unlikely to make new or additional investments in student financial aid that will offset price increases. Indeed, student aid itself may be reduced.

The subjects are price and financial aid, but the issue really is all of the dimensions of higher education funding, since all are interlinked. In simple terms, when state revenues are reduced by adverse economic conditions, state appropriations tend to be reduced accordingly. What is diminished in one of higher education's major revenue sources – appropriations -- tends to be compensated for by increases in the other -- tuition.

Some of the recent years have been rough as far as budgets are concerned, but public colleges and universities have continued to operate in Washington. Students have continued to enroll, courses continue to be offered, learning and research continues to occur.

There even have been recent signs of relief, although not often does this swallow become a summer. And not all of the auguries portend improvement. Some consider the fiscal problems confronting the state to be inherent and in any case not likely to dissipate soon. In a 1999 study, economist Harold Hovey prognosticated that the higher education funding outlook would remain dire over the course of the next eight years (to 2008, the period covered by his projections). He noted that state revenues generally are unable to keep pace with increases in personal income for structural reasons even in the best of times. The costs of state services rise at a faster rate than the personal income-dependent state revenues needed to support them. For each 10 percent increase in personal income, state and local taxes, Hovey argued, rise only about 9.5 percent. Thus, even without such encumbrances as recessions, there would be a problem unless tax revenues could be increased at the same rate as services.

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13 He also is a former head of the Washington higher education coordinating board (then Council of Postsecondary Education).

According to Hovey's projections, the average gap between government spending and revenues nationally over the 1999-2008 period would be 3.8 percent. All else equal, thirty-nine states, including Washington would experience deficits. In Washington's case it would be a 6.7 percent shortfall (i.e., projected funding would fall short of that needed to sustain current service levels by this fraction) ranking it 36th in the country on this severity scale.[14]

The Hovey study was updated by the Rockefeller Institute of Government in 2003. The following figures, which apply to the western [WICHE] states, are from the Rockefeller update. They apply to the period 2005-2013:[15]

State*	Growth Rate Higher Education (%)**	Projected Fiscal Surplus or Gap as a % of Revenue***
North Dakota	(0.1)	-3.3
Colorado	40.8	-4.4
Arizona	58.0	-5.1
Hawaii	21.4	-5.3
U.S.	34.4	-5.7
Alaska	20.5	-5.7
Utah	40.1	-5.8
Montana	5.6	-5.8
New Mexico	20.5	-5.9
California	45.7	-6.2
Idaho	30.4	-6.9
South Dakota	9.2	-7.0
Washington	**28.5**	**-8.0**
Oregon	32,9	-8.2
Nevada	74.9	-9..3
Wyoming	4.9	-12.9

* Ranked in ascending order by projected revenue gap.
**Projected eight-year percentage growth in state higher education expenditures.
*** Fiscal surpluses or shortfalls at the end of eight years as a percentage of revenue in year 8.

The tension between the two variables – projected higher education growth and projected revenues – is clear.

A recent SHEEO[16] observation also applies to higher education funding issues, both helping explain them and reminding people that it is a national phenomenon, perhaps to some extent reassuring them:

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14 Harold A. Hovey, "State Spending for Higher Education in the Next Decade: The Battle to Sustain Current Support," NCPPHE, San Jose, July 1999

15 "State Fiscal Outlook from 2005 to 2013: Implications fro Higher Education."

16 SHEEO is the acronym for the State Higher Education Executive Officers Association.

> Recent declines in state support for higher education have received substantial public attention. Some have suggested that states are abandoning their historical commitment to public higher education, expecting parents and students to pay a larger share of the cost. National data from the past quarter century and a more detailed and recent look within states indicate that this conclusion is premature and superficial. Overall, states have largely maintained operating revenues for higher education, even though they have struggled to keep pace with enrollment growth and inflation in times of recession. Constrained state budgets and rapid enrollment growth during economic downturns tend to depress state funding per student in a cyclical pattern, observed three times over the last 25 years. In fiscal 2004, state funding was at the low point of the most recent of these economic cycles.[17]

The SHEEO report notes that during the 25-year period starting in 1980, state support for higher education nationally was outpaced by enrollment growth and inflation, causing per student appropriations to sometimes dramatically fluctuate from year to year. State support tends to rebound when enrollment growth moderates. SHEEO's further observation is that “history and the growing demand for higher education suggest that the states’ commitment to higher education will continue.[18]

Considerable state effort is directed to enrollment projecting, as noted below. The interest in stable or predictable higher education funding suggests that equal attention might be directed to long-term state fiscal projections of the Hovey-Rockefeller type. This is not often the case. A 1999 NORED study of other states concluded that while most develop *enrollment* forecasts, few states routinely develop long-range *revenue and expenditure* projections.[19] When they occur the exceptions to this generalization appear to be time-limited and related to circumstances unique to each state.[20]

Rather than long-term fiscal projections, most states rely on the biennial revenue projections that inform and discipline the appropriations process. Typically, these projections are offered by either the state's controller or a finance

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17 SHEEO, “State Higher Education Finance, FY 2004, p. 8.

18 *ibid.*

19 Williams Chance and Pickens, *State Initiatives to Accommodate Enrollment Surge: A Study of Ten States in Crisis*, [NCPPHE, 2000].

20 For example, staff of the Colorado Legislative Council prepare five-year revenue and expenditure projection reports which appear to be detailed and authoritative. These are the result, however, of the need for a good analytical capacity under the state's strict, voter imposed controls on spending increases and refund requirements for surplus revenues above certain year-end reserves.

department in the executive branch, though sometimes the forecasts must receive the imprimatur of an inter-governmental committee (as in Texas). Since all states are constitutionally bound to operate with balanced budgets, the planning emphasis tends to be increasingly narrow as the next budget period approaches.

A related reason few states take seriously the need for long-range fiscal projections, especially when such vital issues as higher education enrollments are at stake, is the volatility of state revenues, which makes projections difficult and to some extent invariably wrong. This was most obvious during the past decade when state revenues experienced deep and unpredicted declines during the early 1990s only to rebound with unprecedented *real* increases later.

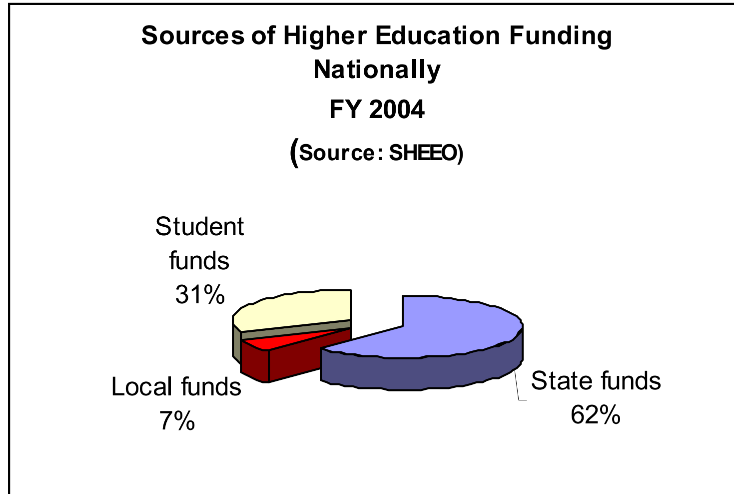
The Context: Tuition and Fees and Student Financial Aid

The economy drives tax revenues, which in turn affect appropriations, a major source of income for Washington's colleges and universities. Tuition is another. Federal research grants and private funding sources comprise a third major fund source.[21]

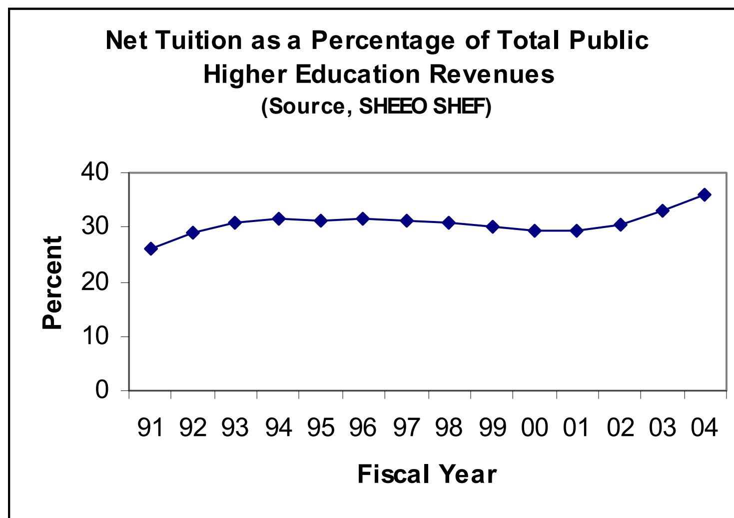
According to SHEEO, in 2004 state and local governments provided $69.4 billion to higher education nationally. State tax appropriates accounted for 84.4 percent of this total. Gross tuition and fees totaled $38 billion (FY 2004). After subtracting state-funded student financial aid and institutional discounts and waivers, the net tuition revenue was $31.5 billion, bringing the combined funds from state (62.1%), local (6.7%, and student sources (31.2%) to $100.9 billion.[22] The distribution is depicted on the following chart.

21 Dennis Jones at NCHEMS has developed a chart showing the interplay among the major fund sources, providers, and other players. The chart is available at www.higheredinfo.org.

22 State Higher Education Finance 2004, *op. cit*., p. 15. Also see Dennis Jones, "Financing in Sync – Policy Brief," NCHEMS, in WICHE, Policy Insights, October 2003. According to the author, ". . . [M]ost public institutions get the vast majority of their unrestricted operating revenues from only two sources – the state and students. Other sources provide funds for specific (restricted) purposes, but only states and students underwrite, in any significant way, the ongoing operations of the institutions."



Tuition is a big player in all of this. In terms of the national pattern, after remaining relatively steady, even declining slightly, for several years, it has begun to drift upward, as represented on the following national trend line.[23]



According to the same SHEEO report, net tuition revenue constitutes a relatively small percentage of public higher education revenues in Washington, with the share placed at around 25% (FY 2004; the individual institution and system contributions to this average can vary widely, see the HECB data that appear below in another section). Washington ranks ninth nationally in this respect. Vermont leads the states, with tuition accounting for 78.7% of total revenues there.

Definitions are important, but this much seems clear: over the last two decades, the share of total revenues received by public higher education

23 SHEEO, *op. cit.*, p. 25. The percentages shown on this graph are not the same as those reported in other parts of the study, but the trend pattern is the point of interest here.

institutions across the country has changed dramatically, with the share provided by the states and federal governments decreasing and the share provided by students and families increasing. There is some reason to believe that with few exceptions, this has happened largely through drift (this would be an example of Charles Lindbloom's "disjointed incrementalism" model) rather than through an explicit policy decision on the part of federal or state governments. That is, it has occurred through a process of incremental displacement of one funding source with another as enrollment demand and economic fluctuations occurred, not often in synchrony.

In a NORED report on higher education governance prepared for the Colorado Commission on Higher Education in 2000 Donald Heller stated, "There is a long and rich history of research studies that have examined the relationship between college tuition prices, financial aid availability, and the decisions that potential students make about enrolling in college . . . Higher education is like most goods and services in our economy – as its price rises, individuals are likely to consume less of it, all other things equal."

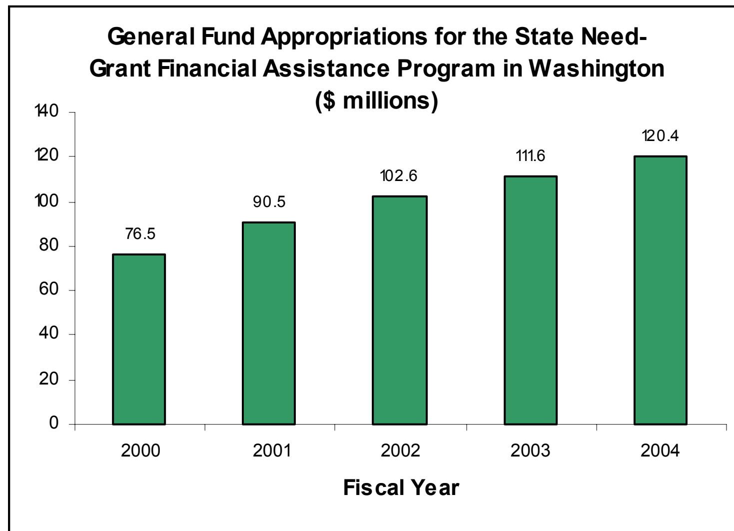
All other things are not always equal, of course, and the relationship between price and participation is very complex, as Heller was able to show. Other factors affect this, such as availability or not of student financial aid, alternative education options, jobs, etc. The break point, the point at which tuition begins to materially affect access and participation, is difficult to establish, and it does not apply equally to all students. In a 1999 national study, Donald Heller found that a $205 tuition increase in 1999-2000 prices was associated with an enrollment decrease of 0.5 percent in public four-year institutions, and $184 increase would result in a decrease of 2.3 percent in community colleges.[24]

Tuition, "price," is the main variable people focus on when they express concerns about affordability, although most also recognize that the full price of college includes a lot more (books, room and board, etc.). Concerns seem to improve a little when the option of offsetting financial aid for families that may not be able to afford the price is offered. This probably would not apply across all types of institutions, but an American Council on Education poll of Washington adults in 2002 found that 72 percent would support tuition increases at the

24 "Tuition Pricing and Higher Education Participation in Colorado" (September 25, 2000), included as an appendix to the NORED report, *Higher Education Governance in Colorado at the dawn of the 21st Century* (November 2000). Heller notes that, "There are a number of caveats to be aware of when considering these findings. First, the reader should remember that these effects are generally consistent when you are examining the behavior of large populations of students. You cannot use these to predict with certainty how a particular policy change may affect the behavior of any single student, or the aggregate behavior of a relatively small group of students, *or even enrollments in a single state*. [Emphasis added.]

University of Washington if required by budget cuts, and if offset with increased financial aid for students who cannot afford to pay more.

General Fund appropriations for Washington's Need-Grant Financial Assistance program have increased steadily during the past five years, rising nearly 37% over this period:

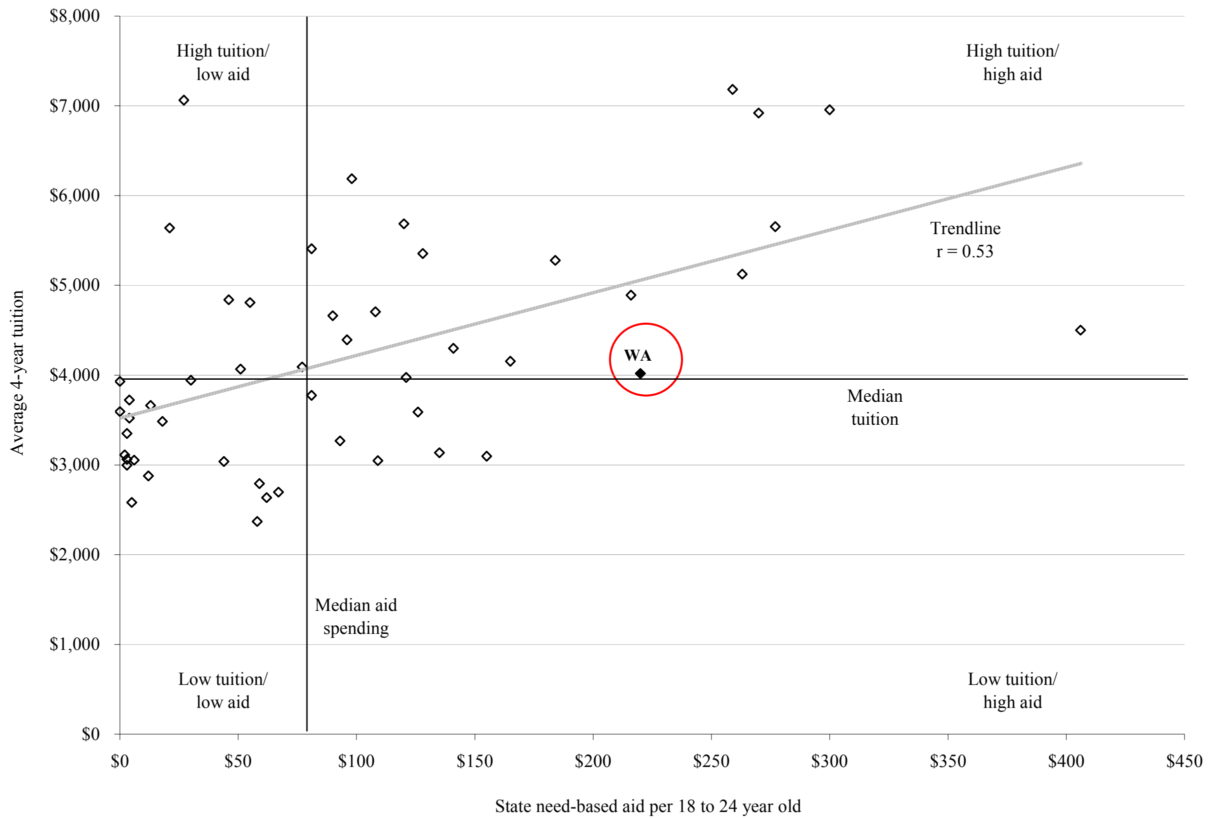


Generally speaking, Washington is a moderate (medium) tuition/moderate-aid state. Using 2002 data, last year (2004) Don Heller developed the following scatter gram for inclusion in the higher education funding report for Kansas.[25] It has been modified for inclusion in this proposal.

25 NORED, *A New Horizon 2*, November 2004, p. 82

NEED-BASED GRANT SPENDING PER CAPITA AND FOUR-YEAR TUITION PRICES, 2002

(Indicating Washington State's Comparative Placement)



The figures so far have aggregated tuition rates for all types of institutions. Variances begin to appear when rates are separated by institution and sector. The HECB prepared the following figures for the 2003-04 academic year. The HECB's annual tuition and fee reports, it should be noted, are national standards utilized across the country.[26]

26 2004-05 Washington State Tuition and Fee Report, p. 14.

Washington Resident Undergraduate Tuition and Fees Compared with Other WICHE States 2004-05

(Source HECB)

	UW	WSU	Comp. Univ.	TESC	C/TC
Resident Rates	$5,181	$5,154	$3,947	$3,900	$2,313
WICHE States Average	$4,312	$4,312	$3,661	$3,661	$1,995
Dollar Difference	$869	$842	$286	$239	$318
% Difference	+20.5	+19.5	+7.8	+6.5	+15.9

The percentage rate increases by type of institution, according to the HECB, between 2000-01 and 2004-05, were the following:

Percent Change in Resident Tuition and Fees by Sector and National Ranking by Rate of Change, 2000-01 to 2004-05

(Source HECB)

	%	Rank In % Chg.
Flagships/RUs	37.8	31
Comprehensives	36.6	31
Community Colleges	41.0	18

In the case of the flagship universities, the annual rate of change for Washington exceeded the national average one time during this period: from 2001 to 2002 the rate of change was 11.8%, compared to the national rate of 10.1%. This also was the case with the comprehensives (13% compared with 10.5%). In the case of the community colleges this occurred twice, in 2000 to 2001 and 2001 to 2002 (8.4% compared to .4.9%, and 13.7% compared to 8.9%, respectively.)

Washington has employed different approaches to tuition setting in recent times. Since 1999 the institution and system governing boards have been able to set specific rates up to state mandated limits, in effect using a base plus allowable annual incremental change approach. The HECB 2004 Master Plan describes the annual limits for resident undergraduates as the following:

1999-00	4.6%
2000-01	3.6%
2001-02	6.7%
2002-03	(UW,WSU) 16%, (Comprehensives/TESC) 14%. (CTCs 12%)
2003-04	7%
2004-05	7%

In the 2005-07 biennium operating budget (HB 6090) the Legislature continued the 7% mandate for the research universities, reduced the limit to 6% for the comprehensives, and to 5% for the community and technical colleges.

At the same time, it reduced state support by 25 cents on each new dollar raised by the tuition increase on resident undergraduates (a $17 million reduction in state funds). It also increased funding for the State Need Grant program by $69.7 million, which had the effect of expanding eligibility for the program to 65% of the median family income (up from the present 55%) to help reduce the impact of the tuition increase. According to the HECB, resident undergraduate students at the research universities paid nearly 52 percent of the cost of instruction in 2004-05, compared with 25 percent in the late 1970s, when the earlier approach applied.

The change appears to represent a rather clear example of a redistribution of education costs, continuing the shift away from the state's previous reliance, for nearly 20 years, on a cost sharing approach in which the student was responsible for a specified share of instructional costs. Both of these are subjects for the next section.

The Context: Costs of Instruction; Allocating Costs Among State Funds, Tuition, and Financial Aid

Washington's experience with tuition as a percentage of cost, or use of a cost-sharing model, may go back further than many realize. The genesis as in other states was the Carnegie Commission on Higher Education's report, *Who Pays, Who Benefits*, which was intended to establish a tuition policy framework for consideration by all of the states.[27] Four years ago, Jane Wellman, Senior Associate of the Institute for Higher Education Policy, summarized the Commission's intent as providing:

- A framework for thinking about higher education finance and the role of tuition as revenue;
- An analysis of revenue and expenditure patterns to get at the issue of 'who pays;'
- An examination of the range of personal and societal benefits accrued from investment in higher education that highlight the issue of 'who benefits;' and

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27 The report was printed in 1973, although many of the policies it expounded were being widely discussed before its formal release.

- Recommendations on optimal pricing policies and overall strategy changes in investment in higher education to achieve greater equity and productivity.[28]

The most frequently cited Commission recommendation is that resident undergraduate tuition charges should average about one-third (30%) of the institution's total cost to educate a student. The Commission's call for an education cost burden distribution among the major participants – students/families, taxpayers, and gifts -- arrayed as follows (excluding students' foregone income while in college; the Commission's model also is a little different than the stated Washington Learns' interest in a distribution between the student, the state, and student financial aid):

Families	Taxpayers	Philanthropic
30%	60%	10%

The Commission also recommended that tuition be kept as low as possible during the first two years and allowed to rise at successive levels, especially at the graduate and professional levels. It recommended an expansion in loan financing for higher education, along with income contingent repayments. And it called upon states to invest in private higher education with state policies designed to reduce the price differential between the public and private sectors and through portable student aid programs.[29]

Washington subsequently pursued several aspects of the Commission's model. The 1975 Washington Legislature directed the then Council on Postsecondary Education to survey other states for examples of tuition and fees associated with higher education costs, and to develop, test, and recommend a standard method for determining the cost of instruction. It also was instructed to make recommendations on the share of costs to be borne by different classes of students (including tuition waivers.)[30]

The Council's May 1976 report, *A System of Establishing Tuition and Fees as a Proportion of Educational Costs*, recommended such a cost-sharing system. It also recommended that capital amortization costs and services and activities fees be excluded from the calculation. A differential pricing structure was recommended for the different types of institutions, as follows (using the present terminology for what were then two universities, three state colleges, TESC,

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28 *Looking Back, Going Forward: The Carnegie Commission Tuition Policy*, 2001, p. 2.

29 The first suggestion led to Washington's ill-fated tuition supplement program, enacted in 1971 and subsequently and rather rapidly deemed unconstitutional by the State Supreme Court. Washington's response to the second principally is the State Need-Grant program.

30 The Council was the immediate ancestor of the HECB. The Council itself was re-designated Council on *Postsecondary* Education, it had been Council on *Higher* Education, and its membership expanded to reflect its wider purview also in 1975.

community colleges but no technical colleges). The tuition for each type would be based on the following percentages of instructional costs:

Research Universities	25%
Comprehensive Universities	20%
The Evergreen State College	20%
Community Colleges	16-2/3%

The report also recommended that graduate tuition be set at $115% of the undergraduate charge, and the price of professional programs (MD, DDS, and DVM) be160% of the undergraduate rate. Additional recommendations applied to the price to be charged to nonresidents.

A further note of interest is the CPE's contemporary [1976] survey of other states' tuition based on cost of instruction policies. States where a definite relationship at the time existed between the two elements were Colorado, Kansas, New Hampshire, and Wisconsin. Florida, Illinois, Michigan, New Jersey, Ohio, Oregon, Utah, and Virginia were considering such a policy.

A tuition policy linking price to costs of instruction was adopted by the Legislature in 1977 and the policy was continued to the mid-1990s. It appears to have been abandoned when state appropriations declined, leading to reduced instructional costs, and then to an imperative to reduce tuition proportionately (as costs go down so would the prices that were linked to them). This was at the very time the funding dynamic was forcing attention to the need to raise tuition. Had the policy remained in force, the institutions would have experienced a double whammy. Such a scenario was not envisioned by anyone in the mid-1970s, and it probably represents a classic example of unintended consequences.

Changes have ensued. The estimated family shares of public institution operating revenues (total, which includes state appropriations and tuition; note: this is only an approximate proxy for instructional costs) for the WICHE states are shown on the following table. These apply to FY 2004. The similar figures for FY 1991 are shown for comparison purposes:

Family Share of Public Institution Total Operating Costs**
WICHE States, FY 2004
Source: SHEEO/SHEF, cited higheredinfo.org

State	Family Share FY 2004*	Family Share FY 1991
Alaska	23.3%	15.0%
Arizona	32.3%	29.2%
California	19.8%	10.6%
Colorado	52.2%	43.2%
Hawaii	19.8%	8.1%
Idaho	21.7%	13.5%
Montana	49.7%	23.3%

Nevada	22.0%	21.9%
New Mexico	16.8%	17.0%
North Dakota	40.4%	34.9%
Oregon	51.4%	26.3%
South Dakota	50.8%	38.0%
Utah	33.6%	25.0%
Washington	24.3%	19.8%
Wyoming	15.5%	11.8%
US Average	35.8%	26.2%
WICHE Average	31.5%	22.5%

*Nominal Dollars: Total Revenues/Net Tuition Revenue = Family Share

In only one case, New Mexico, is the family share greater in FY 1991 than in FY 1994. The family share proportion of operating costs in Washington increased 22.7%, but this is less than either the WICHE state average increase (40.0%) or the US Average increase (36.6%).

Returning to Washington and costs of instruction, *per se*, in recent years, institution and system boards (SBCTC) have been allowed to set specific rates within state-mandated limits, so the tuition-cost linkage has been ostensibly abandoned. The cost of instruction determination aspect of the policy has continued in a different context, however, and, in fact, in 2004 the scope of the instructional cost determination program was broadened.

Under present law (RCW 28B.76.310) the HECB, in consultation with OFM, the SBCTC, and the public universities, is required to develop standardized methods and protocols for measuring undergraduate and graduate costs. Apparently as separate reports, this includes costs of instruction, costs to provide degrees in specific fields, costs for pre-college remediation, and the costs of state support for students.[31]

HECB cost studies have continued to be conducted each four years. These are at the discipline and course level (lower-division, upper-division, and graduate) scale of detail. Thus, the published reports are not degree program specific. According to the HECB, the cost studies are used to evaluate tuition and fee policies, new enrollment funding, and the costs of proposed new degree programs.

Any discussion of appropriate shares of the costs to be borne by each of the fund sources brings forth a question of how much should be subsidized through financial aid. For example, under the federal methodology used for calculating financial need in college – the methodology used to determine eligibility for federal Pell Grants and federal student loans – the neediest students

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31 HECB, “Recommended Methodology and Timing of Higher Education Cost of Instruction Studies,” June 2005.

are not expected to contribute any of their own or their parents' resources to pay for their education. The full cost of their education is expected to be provided through financial need.

At the time of the 1972 reauthorization of the Higher Education Act, which created what today are called Pell Grants, these grants provided approximately 80 percent of the cost of education at a public, four-year institution for the neediest students. The expectation was that the remaining 20 percent would be provided through some combination of state and institutional financial aid. In practice, however, few high-need students today see the full cost of their education provided through financial aid, at least not without involving significant borrowing.

This state of affairs does not seem to have occurred through explicit policy prescription.[32] As tuition costs have risen over the last two decades, need-based grants – from either the federal government or states – have not kept pace. In a 2002 report titled *Empty Promises: The Myth of College Access in America,* the federal Advisory Committee on Student Financial Assistance found that the neediest students in public four-year universities – those from families with incomes below $25,000 – faced unmet financial need totaling approximately $4,000 per year.

Over the last two decades, the portion of total revenues received by public higher education institutions across the country has changed dramatically, with the share provided by the states and federal governments decreasing and the share provided by students and families increasing. Yet, either by keeping student charges low or by providing need-based student financial aid to low-income students, access, affordability in this case, is both a national and a statewide higher education hallmark and an essential part of any funding mechanism.

Before leaving this subject, there are other reasons than equity for pursuing access for low-income students. A 2005 study of the experiences of state need-grant recipients and non-recipients who graduated from independent colleges and universities in Minnesota and Washington in 2002 found that upon graduation both groups reported the same annual earnings and nearly identical rates of employment, job satisfaction, graduate/professional school enrollment, and living independently from their parents. Both groups also took the same amount of time on average to complete their degrees. State grant recipients reported the same high levels of satisfaction with their college experience as the

32 A 2004 NORED study of funding and enrollment policies in 12 states for the NCSL and NCPPHE, found that most were turning to tuition increases to make up the shortages between funding limits and enrollment increases, although several also were utilizing measures to provide students and families with promises either of tuition stability to price predictability.

full population. The college experience, made possible by the state aid programs, virtually eliminated the income differences between low-income and other students. The family income differences at the beginning of the college experience were $37,000 in Minnesota and $32.000 in Washington. Some of the major findings of the study are displayed on the following table:[33]

Post-College Experiences are Similar for State Grant Recipients in Minnesota and Washington

	Minnesota		**Washington**	
	SG	**No SG**	**SG**	**No SG**
Average Personal Working Income (Full-time)	$27K	$27K	26K	27K
Currently Employed	81%	84%	79%	84%
Working Full-Time	68%	71%	60%	68%
If Working Full-Time				
- At least somewhat satisfied with job	85%	82%	82%	89%
- Current job requires a degree	57%	56%	59%	62%
- Employment related to major	63%	68%	62%	69%
Enrolled in Full-Time Graduate Program	13%	12%	19%	13%
Living on Own (Not With Parents)	58%	54%	60%	48%

Source: Minnesota Private College Research Foundation

Not all states emphasize need in their student aid programs. Washington is one that does, and it does comparatively well in this regard. During the 2002-03 academic year, need-based grant dollars per undergraduate FTE in Washington averaged $509.00. The state ranked first among the WICHE states on this measure:

Estimated Need-Based Grant Dollars per FTE in the WICHE States

2002-2003

Source: WICHE

State	$/FTE
Washington	**$509**
California	$408
US	$387
WICHE	$299
Colorado	$277
New Mexico	$186

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33 Douglas T. Shapiro, *Financing Higher Education Today: How 2002 Graduates Paid For and Perceive the Benefits of Their Education*, Minnesota Private college Research Foundation, May 2005.

Oregon	$139
Montana	$80
North Dakota	$38
Utah	$32
Idaho	$17
Arizona	$16
Hawaii	$10
Wyoming	$8
Alaska	$0
Nevada	$0
South Dakota	$0

The different aid patterns among the WICHE states are suggested by the data on the following table:

Need Based and Non-Need Based Grant Aid Awards by State Grant Programs

2002-03

Source: WICHE

(Grant Aid Restricted to Undergraduates)

State	Need-Based (000)	Non-Need Based (000)	Total (000)	Need-Based as % of Total
Alaska	$0	$0	$0	N/A
Arizona	$2,790	$0	$2,790	100
California	$544,893	$0	$544,893	100
Colorado	$43,178	$21,515	$64,694	66.7
Hawaii	$408	$0	$408	100
Idaho	$874	$4,181	$5,055	17.3
Montana	$2,825	$0	$2,825	100
Nevada	$0	$0	$0	N/A
New Mexico	$12,906	$2,053	$14,959	86.3
North Dakota	$1,397	$397	$1,794	77.9
Oregon	$17,290	$0	$17,290	100
South Dakota	$0	$0	$0	N/A
Utah	$3,799	$0	$3,799	100
Washington	**$113,345**	**$1,367**	**$114,712**	**98.8**
Wyoming	$161	$0	$161	100
WICHE	$743,846	$29,513	$773,360	98.2

US	$3,966,915	$1,202,824	$5,169,740	76.7

The Context: Alternative Funding Systems, Budget Development Methodologies, and Allocation Models

This is an area in which clarity is important. The ultimate authority for state higher education policy and funding rests with the executive and legislative branches of government. The Governor, as chief executive of the state, proposes a biennial budget in December of each even-numbered year. This budget represents the Executive's proposed spending and revenue plan for the biennium. After receiving and reviewing the Governor's proposed budget, the Legislature develops its own in the form of appropriations bills during the regular legislative session. When the bills become appropriations acts, the Governor reviews the budgets within, vetoes all or part as the case may be, and signs them. At this point the state budget for the next biennium is enacted. This will not change.

Although there may be an ill-defined impression that funding formulas and budget models can drive or supplant the appropriations process, they most effectively come into play during the executive budget compilation processes and within systems such as the SBCTC. Thus, they operate on the "input" side of the budget process, but in this state they have never displaced the roles and authority of the two main players the Governor and the Legislature.

Higher education funding formulas are a modern phenomenon. During the 1960s, faced with prospects of resource scarcity and burgeoning service loads (higher education enrollments), states began to look for mechanisms to help determine the necessary levels of higher education funding.[34] The alternatives devolved to either a continuation of incremental funding or the design and application of formula funding models. The former involves increasing or decreasing funding based on the previous budget period's level (the 'base,' hence 'base-plus,' or incremental budgeting). Formulas develop funding totals on the basis of presumptions about the unit costs of such major programs as instruction, academic support, research, public service, libraries, etc. and data for each category. This is a complex form of modeling, and there is no universally preferred method: most involve compromises at some point in the design process and differ accordingly.

In an ideal world, the use of formulas can help insulate higher education funding decisions from intervening influences, most notably political. But if this is to happen, almost everything will depend on the extent to which the parties agree

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34 See Russ Denton, "The Funding Formula as a Higher Education Policy Tool in Tennessee," AIR, 2004 for an interesting summation of this history and Tennessee's experience in it.

to the process and structures ahead of time. Some states are better at this than others, but even those that are remain susceptible to changing legislators, executives, policies, and priorities. Formulas, in other words, are not entitlements.

Formulas also cannot guarantee that a state will allocate the indicated funds to higher education. Politics has been described as the authoritative allocation of scarce resources. Few better examples of this can be found than the creation and adoption of state budgets. Thus, formulas and budget models can work well in the budget *development* process, especially as ways to allocate funds equitably, as equity is defined in the formula, among institutions. They lose much of their force and effect in the budget *authorization* process as they confront scenarios of declining revenues and rising service levels, and as the legislature exercises its power of the purse in it quest for balance. This is such an obvious axiom that it sometimes seems to be overlooked.

Formulas are used in a majority of states, but the future of formula funding is uncertain. Thirty-six states were using formulas for higher education in 1984. By 1992 the number had dropped to 32, and it was down to 30 four years later.[35]

In an SREB[36] 'primer' on higher education funding, the authors describe how the objectives of funding formulas and processes have changed over the decades as follows:[37]

1950s	Adequacy
1960s	Growth
1970s	Equity
1980s	Stability, Quality
1990s	Stability, Performance, Reform

Funding processes, formula or other, also require a lot of comparative data for use as benchmarks to measure effort. Benchmarks are popular. Whether states employ formulas or not, assessments of effort, costs, funding sufficiency, and effectiveness as a practical matter have devolved to comparisons with other states.[38]

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35 McKeown, "State Funding Formulas: Trends and Issues," and various papers, cited in Denton, *op. cit*.

36 Southern Region Education Board.

37SREB, *A Primer on Funding Public Higher Education*, August 1999, p. 2

38 Washington also utilizes peer institutions for comparison purposes. The UW comparison group is all Category 1 public research universities with medical schools. WSU is composed of all public land-grant universities classified as Category 1 and 2 with veterinary schools. The comprehensives' group is all public institutions classified as category 1 comprehensive colleges

Just as state-by-state comparisons are utilized as benchmarks, yardsticks, and points of reference, and they can imply standards, they also can be applied as targets to measure progress to the achievement of state goals from year to year, by comparing the home state with a set of peers. Their use in this manner is risky, since the other states are doing likewise and the targets are constantly changing: hence, the reasoning either is circular or a race that never can be won, a little like a dog chasing its tail.[39] The use of peers also brings up the question of *which* states to use for such comparisons. Peer identification (state, system, or institutional) can activate the interests of a lot of players with disparate interests.

Washington has had a varied experience with formulas, cost sharing, and budget models, but it also straddled the formula funding-incremental funding fence even when formulas were used. This may have had something to do with the degree of consensus that prevailed on the formulas. Developed during the late sixties largely by the public four-year institutions and subsequently used by the CHE , CPE, and HECB they never seemed to have engendered much receptivity by the state budget office (OPP&FM,[40] and then OFM). There also was a strong impression among those outside of the institutions that the formulas were too rich, an impression perhaps reinforced by the observation that the institutions never were funded at a level much higher than about 75% of the formula 'entitlement.'

This came to be perceived as a lever the institutions were using when they argued their budget needs before the Legislature. Legislators may have been cross-pressured by what seemed to be a hopeless task, and after about 25 years or so, formula funding quietly departed the scene, and Washington forthrightly joined the ranks of states employing incremental budgeting (although, in fact, it had never really left them.)

Incremental budgeting has been criticized for its emphasis on the increments of change proposed for the new budget and for considering the narrow range of goals embodied in the departures from established activities, expectations that tend to be short-range and pragmatic. More than one college president has complained about the lack of funding flexibility for new program development and innovation because so many of the funds had to be used for programs that were in place and operating. In the words of one observer, “The power of previous expenditures is strong in budget considerations and inhibits policy-makers from major innovations and spending increases beyond those

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and universities. The comparison group for the community and technical college system is all state community college systems.

39 The OFM forecasters identify this as one of the cardinal weaknesses of this approach -- "The method assumes that participation rates of other states are static" -- Lefberg, *op. cit*., p. 6

40 Office of Program Planning and Fiscal Management, now the Office of Financial Management.

required by inflation and population increase. The expenditures of the past continue to be the nucleus around which later expenditures grow."[41]

A couple of further observations apply here. The higher education budgets authorized in this state exhibit many of the characteristics of base plus adjustments for inflation and population growth. This is not to say, however, that the process is immune from strategic planning and analysis, both in the budget development process and in the authorization process. Based on the vast array of materials directed to policy issues and funding that are extant in Washington, these have both resonance and influence. It would be difficult to sustain an argument that planning and analysis have little effect on funding and policy.

Although formula funding is far from dead, much attention now seems to be directed to the identification and articulation of principles to guide policy and budget deliberators as different funding options are considered. A recent California Postsecondary Education Commission report, *California Higher Education Finance: Surveying the Alternatives*, is an example.[42] The list of principles, which really operated as evaluation criteria applied to different budget and funding models, were these. Each proposed funding model was evaluated accordingly:

- Effect on student access to postsecondary education;
- Effect on the quality of programs and institutions;
- Effect on overall affordability;
- General reasonableness of the option and ease of communicating it to students and members of the general public;
- Ease in implementing the option;
- Length of time required to implement the option in an effective manner; and
- Likelihood of the option generating cost savings.

The options or models to which these criteria were applied included the following. The list also is useful for its illustration of alternatives.

- Post-education tuition reimbursement program ("Learn, Earn, and Reimburse"),
- A voucher program,

41 Ira Sharansky, Public Administration: Policy-Making in Governmental Agencies, Third Edition, (Rand-McNally, Chicago, 1975) p. 76.

42 Sacramento, 2003.

- A program that would base funding on completers (“output” rather than “input” funding),
- Differential funding by level of instruction,
- Incentive funding for state priorities, institutional fee management options,
- Full cost pricing and fundamental restructuring of student financial assistance programs,
- Use of technology to improve the *quality* of student learning (interestingly, not as a device to reduce cost, increase access, or expand capacity), and
- Creation of a California Higher Education Opportunity Fund to smooth the ‘boom and bust cycles” in higher education funding (the legislature would set aside specified resources during good times to cover shortfalls during more difficult times.) This last bullet was the only option that received a clear favorable endorsement

For its part, the SREB primer on formula funding offers twelve guiding principles for funding methods for public colleges and universities. According to SREB, they should:

- Be based on state goals for postsecondary education (e.g., access and quality);
- Be sensitive to different institution missions (which require different levels of per student funding);
- Provide adequate funding (at least determining how much funding is needed for the institution to fulfill its mission);
- Provide incentives for or reward performance;
- Appropriately recognize size-to-cost relationships (the difficulties of achieving economies of scale in smaller institutions);
- Be responsive to changing demands;
- Provide reasonably stable funding (at least allow time to respond to major funding shifts);
- Be simple to understand;
- Fund institutions equitably;
- Allow for special purpose units (e.g., institutional emphases or programs of excellence);

- Be based on valid, reliable data; and
- Allow administrative flexibility in spending funds.

The list of principles describes both a range of concerns a funding system must consider, and the importance of defining and agreeing on them in a consultative and consensus development manner.

The Context: Linking Funding with Policy -- The Funding Policy Efficacy of the Governance Structure

The Washington Learns Committee has identified fiscal efficacy of the governance system as a topic to be addressed as part of the financial analysis. The first observation to be made here is that like all other states, Washington utilizes separate budgets for each of the major education sectors (e.g., K-12 and higher education), a point made in an earlier progress report. There is no "Education" budget, so if one wishes to think of Education as a unified policy paradigm, e.g. K-20, the efficacy of the divided governance and fiscal structures immediately is a problem.[43]

That said, insofar as higher education funding policy is concerned, Washington has a mixed but essentially decentralized system. Budget requests and appropriations for the four-year institutions are institution-specific. The State Board for Community and Technical Colleges compiles a total system budget and disperses appropriated funds for the institutions that comprise that sector. It is the only centralized budget entity in Washington's higher education system.

The HECB is a coordinating board focused essentially, but not exclusively, on the four-year sector. It is responsible for developing and monitoring a strategic master plan for higher education, but it does not have direct higher education budgeting authority. Rather, it is a 'recommending' agency in this regard.

Discussions of the fiscal efficacy of governance components in this state tend to find their way to the coordinating board's role and authority, and they usually arise as part of debates surrounding what new form the agency should take, debates that have occurred at least twice in recent years (1969, when the CHE was established; 1985, when the agency was reconstituted as the HECB). In neither instance was the budget authority of the board increased; it has been and remains a budget recommending agency.

Statewide higher education agency budget authority is a distinguishing feature among the species that constitute that genus, although its presence or lack is not the only determinant of agency strength and effectiveness.

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43 Richard Lutz & William Chance, *Survey of State K-20 Programs and Initiatives* (NORED, for Washington Learns, February 13, 2006.)

Structurally, there are three broad forms of statewide agencies, with several sub-forms, distinguished in large part by their governance and fiscal authority. These are: consolidated governing boards, coordinating boards, and state higher education planning agencies. According the Education Commission of the States' there are 24 "*Consolidated Governing Board*" states (plus the District of Columbia and Puerto Rico); 24 "*Coordinating Board*" states; and *states with planning/service agencies but no other central board* (Delaware and Michigan,)

Because there are so many configurations among states, such broad categories conceal more than they reveal. In fact, each state's approach to higher education governance, fiscal authority, and coordination is different.

When the subject of governance related to fiscal policy arises, it usually evokes some aspect of a system budget for public higher education; in Washington's case, at least for the university sector. The debates around this issue tend to be intense with little evidence of an interest on the institutions' part in a centralized higher education budget. Aside from the community/technical college governance and budget systems, the situation is much as it was in 1964, when the Council of Presidents, a voluntary association of public institution presidents, was the leading player outside of government in the biennial budget dramas.

Control over institutions of higher education varies widely throughout the country. The organization patterns range from extensive administrative, program, and budget controls in some statewide higher education agencies, on the one hand, to something like policy guidance, on the other. The former agencies usually are classified as 'regulating' boards: the latter as 'recommending or planning boards.

The distinction is useful but it should not be pushed too far, as even those state boards with significant central budget authority, the 'regulating boards,' do not have authority to extend such powers to all of the institutions in their state. Hence, like statewide coordination, the regulating attribution can mean pretty much anything a state or an agency wants it to mean.

In recent years, some of the regulating boards have begun to decentralize and delegate more control back to the institutions in efforts to improve their capacity to adapt and respond to new economic conditions. Many of the recommending or planning boards have allowed such freedom by default, and find little need to change their powers or their application.

This, the evidence of a shift to performance based 'contractual' agreements with the state, is a particularly important trend to monitor. Both Colorado and Kansas employ performance agreements with their public institutions that in effect extend to them institutional managerial autonomy in

exchange for agreed-upon performance in the fulfillment of state policy goals. Recently Virginia implemented such a system. It also identified a process for entering into such relationships on a stepped basis for different institutions that were at different levels of qualification.

In a paper on "Prospective Governance," Darryl Greer insists that the stress associated with the changes in society's financial and educational environments is so great that traditional forms of governance are no longer adequate (hence, "prospective governance"). Scarcity of funds is the most common point of stress. As states 'disinvest' in higher education, and do so with public support, consumers will demand more, principally because of higher education's importance to economic opportunity. According to Greer, this will require the system to become more productive. The application of technology and the presence of profit motivated competitors will force public higher education to become increasingly commercial both in its instructional methods and in its delivery systems.

This may suggest a theorem that can be overstated easily: pressure for decentralization or delegation is inversely proportionate to funding capacity– the less the capacity, the greater the pressure for delegation. Thus, one effect may be a leaner, more market-driven, consumer-oriented higher education enterprise; another will be the delegation of authority for more and more decisions and greater degrees of managerial freedom to the institution level, to be exercised within an identifiable state policy framework.

The Context: Enrollment Growth and Planning

Over the past few decades there has been considerable growth in higher education in this state by virtue of population growth, accommodated in no small part by the increased capacity gained by the launching of the state community college system in1969-70, the creation of The Evergreen State College during the same period, the re-designation of the state colleges into comprehensive universities, formation of branch campuses in the late 1980s, and the re-designation of the vocational-technical institutes as postsecondary technical colleges (and their inclusion in the community college system) in the 1990s.

For the period 1991 and 2004, Washington ranked 7th in the country in the percentage change in public higher education FTE enrollments, with slightly over 40%. The US average was 21.8%. Only Nevada, Utah, Mississippi, Arkansas, Louisiana, and Idaho experienced greater proportionate increases than Washington. Nevada's increase was 86.9%[44].

Higher education appropriations in Washington and many other states did not always keep up. The percentage drop in constant 2004 dollars per FTE

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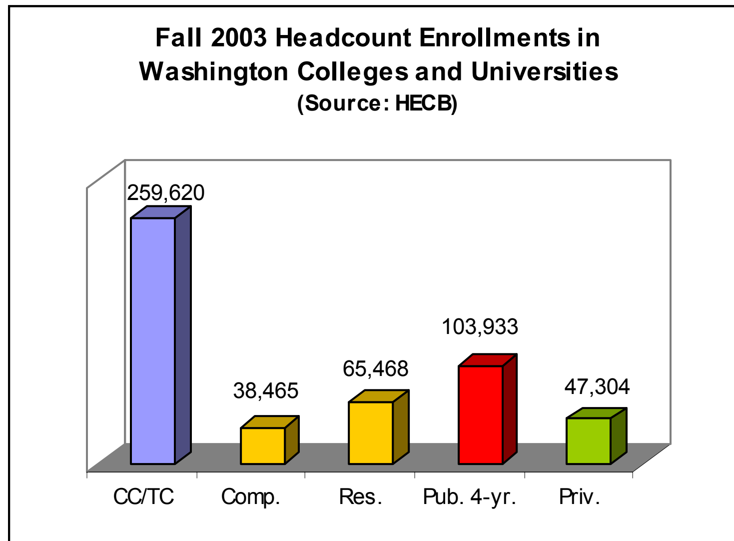
44 SHEEO, *op. cit.*, p. 27.

(1991-2004) was about 28%, ranking Washington fifth from the bottom of the national rankings in this regard (Vermont, Colorado, Oregon, and Montana experienced greater proportionate decreases.) These states were not alone: only 11 states maintained a positive funding pattern.[45]

Washington is an especially high participation state at the two-year level, where it ranks fifth nationally. It does less well at the four-year level; different figures are mentioned, but according to OFM it ranks 49th overall (1998 figures; according to this source the state ranks 44th in participation at the public graduate and professional levels.)[46] This standing appears to have remained relatively constant for several decades. In 1980, for example, staff of the then Council on Postsecondary Education calculated the state's four-year participation ranking at 47th.[47]

Headcount enrollments are distributed among the major providers in Washington in the proportions shown on the following chart:



Institution shares and enrollment rates overall reflect changes in the portion of the state's population aged 17-22 years, a point made by OFM. They dip or stabilize during periods when the magnitude of this sector of the population steadies or declines, and resume growth when it does.

According to OFM, in 1970 (the year the state community college system became operational), enrollments in public two- and four-year institutions

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45 *Idem*, p. 28.

46 Higher Education Trends and Highlights, March 2005, p. 8

47 Chance and Uhlman, "An Enrollment Model for Washington State, the Seven Percent Solution," 1980. This report appears to be out of print.

represented 47 percent. In 2004 the rate had increased to 52 percent.[48] Meanwhile, the share held by students aged 23-29 declined from about five percent to around 4.5 percent. The share held by those over age 30 remained relatively constant at about 0.5 percent.

The four-year institution participation rates have been fairly stable at around 12 percent for this prime age group over this period, while those for the two-year institutions have risen from around 7.5 percent to 11 percent.

OFM has estimated that nearly 23,000 FTEs over the 2004 base will need to be added to the public higher education system by 2010 to keep pace with projected population growth. By 2020, some 35,332 FTEs would need to be added. The institutions will need to add about 3,000 FTEs per year to maintain the present participation rate through 2011-12. After the baby-boom cohort passes through prime college age that year, the necessary annual increments are projected to decrease dramatically.[49]

Economic growth, opportunity, diversity, and competitiveness comprise societal and policy goals in Washington. It would be difficult to argue against it indeed, economic growth is among the most often cited public goals throughout the state, and it evokes policy attention at all levels, state and local.

It is when the economic outlook turns less rosy that irony materializes. Higher education is a major and multi-faceted economic resource: it contributes to state and local economies through purchases and expenditures; it attracts new resources to the state in the form of students, new faculty, grants and contracts and industries; and it prepares people for careers in economically competitive programs and enterprises, people who, in turn, contribute with their industry and taxes.

It is exactly when these contributions become crucial, during hard economic times, that public funding becomes problematical, the price of access goes up, and student support funding declines. It also is during such times, as a further irony, that the demand for the services higher education can offer increases, as people return for retraining opportunities or face economic disincentives to graduate and enter an unpromising employment environment.

Enrollment levels are affected by economic change, displaying an inverse relationship to economic patterns, rising as the economy slows and dropping as the economy heats up, and job opportunities once more begin to compete with college applications. The contradiction is that funding is also affected by economic change, although not inversely: revenues drop as the economy slows and rise when the economy picks up. This phenomenon is not unique to

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48 OFM, *op. cit.*, p. 1.

49 *Idem*, p. 6.

Washington, and it helps to explain the variance between funding and enrollment patterns over time.

The typical pattern is one in which the higher education system experiences funding cuts in the midst of enrollment pressure. The typical pattern also is one in which pressure on tuition increases as state funding contracts – in effect, tuition and fee increases are used to dampen the effect. With economic and revenue improvements, legislatures attempt to catch up, although others have observed that tuition rates rarely return to the *status quo ante*. Such conditions help to explain public concerns about affordability.

In a 2000 study of ten states confronting this phenomenon, it was found that the solutions they were employing varied in comprehensiveness, although several were long-term. Some states were stepping back to take another look at how higher education was funded in response to pressure to ensure long-term stability in the patterns of state general funds and tuition levels so that the institutions and students can plan for the future.[50]

The responses fit into a few categories; some apply as well to the Washington Learns Steering Committee's interest in expanding baccalaureate and other program access:

- Construction of a few, though very few, new campuses. Frequently, conversions of existing facilities form the basis for the new campus.
- Increased reliance on branch campuses.
- State funding for leased education centers to provide offerings from many different providers.
- Creation of new kinds of institutions to meet demand in certain geographic areas.
- An increased willingness to merge or combine colleges, including two-year and four-year public colleges.
- Authorizing community colleges to grant baccalaureate degrees, often jointly with four-year institutions.
- Stronger state mandates that public universities accept the credits of courses taken by community college students.
- Construction of college facilities on high school campuses and high schools on college campuses.
- Insistence on using facilities more intensively, especially as a means to accommodate anticipated growth in urban centers.

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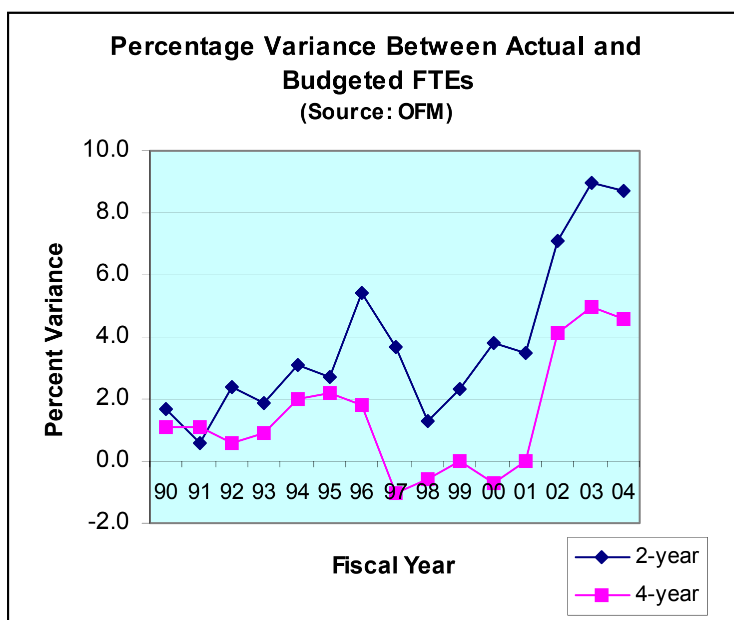
50 William Chance & William Pickens, *NORED for NCPPHE, op. cit.*

- Increasing efforts to provide college level credit to high school students.
- Encouragement and funding to expand courses offered electronically or at a distance from the campus.
- Exploration of new revenue sources to support higher education.
- Efforts to guarantee a certain level of state funding for higher education in return for additional access.

Since 2000-01, the under-enrollments that had been experienced in this state, or, more accurately, the variance between budgeted levels and enrollment levels (especially in institutions in the eastern region of the state), have disappeared. Since then, enrollments have exceeded budgeted levels by about four percent, with all four-year institutions presently "over-enrolled."[51]

According to OFM data, the change in the levels of variance between enrollments and budgeted levels has been the following:[52]



Each state uses some systematic method to project enrollments. Washington's model utilizes present participation rates, population change, and high school graduations as the principal variables. The projections are 'conservative' in the sense that the future they describe is what it would be by carrying forward present participation rates applied to the state population forecast for the years of interest. The participation rate is the number of persons

51 *Idem*, p. 7.

52 *Ibid.*

in a particular age group enrolled in public or private higher education per 100 persons in that age group.[53] According to OFM's Forecasting Division, the advantages of the use of participation rates are:

- They can be calculated in different ways (different age groups type of institution or sector, statewide, by country, etc.).
- They can be compared over a period of time to determine if service levels have changed.
- They can be compared with those of other states.
- They can be calculated by using current or alternative participation rates applied to different population scenarios.[54]

They also display several limitations, again according to the OFM Forecasters:

- They are not projections of need or demand for the future. They indicate only what the enrollments would be in the future if present participation rates were maintained.
- They reflect present access policies [author's note:and, to the extent that present and past participation rates were affected by policy or funding decisions, as statements of 'true' demand, they would be dampened or enhanced accordingly].
- They reflect the present distribution of students between the two- and four-year segments, and among lower, upper, and graduate/professional levels.
- They are based on long term population forecasts, which can vary 10 to 15% on either the low or the high side.[55]

In another report, the OFM forecasters identify three other (in addition to the participation rate model used by OFM, HECB, SBCTC, and WFECB) approaches to higher education enrollment and demand in use in Washington. These are projections based on participation rate goals (e.g., HECB goals aimed at recommended percentile rank among states) current projection supplemented with analyses of special demand factors (used by WTECB and SBCTC), and estimations of un-served applicants (used by OFM and the institutions).[56]

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53 Irv Lefberg, "Presentation on Population Trends and Enrollment Projects, and Funding Outlook (OFM, Augest 4, 1995), p. 12.

54 Idem. p. 13.

55 Idem., p. 14.

56 Irv Lefberg, Evaluation of Long-Term Higher Education Enrollment Statistics (OFM, January 1999) p. 3.

The strengths and weaknesses of each were described by the OFM forecasters. Those applying to the Current Participation Rate Method, the methods used by OFM, were these:[57]

Current Participation Rate Method's Strengths:

- It captures the influence of population growth on enrollment
- It is a relatively objective method of enrollment forecasting
- It can be applied regionally
- It is relatively simple to explain and understand

Weaknesses:

- It does not capture the influence of factors other than population
- It reflects policy choices and constraints that are inherent in the current participation rate
- It assumes the current participation rate will remain the same
- It does not differentiate among different types of enrollment (e.g., degree areas, vocational/academic)

Different states do different things. The Maryland Board of Higher Education, for example, prepares a "top down" projection for the next ten years. The Commission staff develops statewide projections at the two-year and four-year levels separately, using the historical relationship between the state's population and past in-state enrollments, and then incorporating population projections for eleven different age cohorts. Adjustments to these population-driven results are made to take account of projected high school graduation rates, changes in real per capita income (for projecting part-time enrollments), and the effect of assumed tuition increases. These statewide totals are distributed among the campuses based on historical patterns, campus enrollment policies, and negotiations with the institutions.

The Texas Higher Education Coordinating Board prepares an elaborate "bottom up" set of projections. Separate, fifteen-year forecasts are developed for each of the state's 35 universities and 53 public community college districts and technical colleges by summing fall headcount enrollments and employing five years of age-specific and racial/ethnic-specific actual enrollments for each of the 254 counties in Texas.

The enrollment forecasts are then based on county population projections disaggregated by age groups and racial/ethnic groups (Hispanic, Black and

57 Idem., pp. 4-8.

White/Other). Adjustments are then made to take into account changes in racial participation rates which are greater than population growth, enrollment caps, the past accuracy of forecasts, and enrollment management practices among some campuses.

Texas has recently changed its approach in one important way. The methodology continues to produce an "official" set of statistics for each campus and for the state as a whole but, in 1998, the Board's staff decided to prepare an official *parity enrollment forecast*. "One of the highest priorities for Texas higher education is to increase minority participation through enrollment and retention," the report insisted.

The parity forecast assumed that by the year 2015, Hispanic and Black enrollment rates will be at parity with the White/Other rates for 1997 and that the racial/ethnic mix of students will approximate the racial/ethic mix for the 15 to 34 year old population in Texas by 2015. The following display shows what a dramatic difference this assumption makes in the two sets of projections.

The Official Enrollment Projection Compared to the Parity Projection for 2015 Public Higher Education Institutions in Texas		
Institutions	***Standard Projection for 2015***	***Parity Projection for 2015***
Public Universities	423,465	606,509 (43.2% higher)
Public Community and Technical Colleges	488,367	563,866 (15.46% higher)
Total Enrollment in Public Higher Education	911,832	1,170,375 (28.4% higher)

Source: THECB, Enrollment Forecasts, 1998-2015, pp. 46-9.

Other important variations among the states should be noted. Sometimes the projections are statewide in scope and developed at the state level, as in California. Colorado, and Washington by agencies [OFM] charged with that task, and sometimes, as in Arizona, New York, and North Carolina, these are prepared at the system level for the respective systems. Some employ normative or goal-focused standards for planning purposes.

Even when a state-level agency bears responsibility for the projections, separate models may be developed by the different entities. In California, for instance, so many different sets of projections were floating in the public domain that three independent experts were hired to offer their opinions and settle the

dispute![58] Other states, such as Florida, have traditionally relied on enrollment conferences where institutional representatives meet with state officials to arrive at a consensus forecast, typically for not more than the next biennium.

Enrollment planning in the states does not always take serious account of the private higher education sector in projecting enrollment demand and supply. Often this sector employs an entirely independent approach from the official forecast. Sometimes, the statewide association for these institutions assembles private institution projections for the state planners. In North Carolina the state association polled its member independent institutions for estimates of how much growth they could accommodate individually, and the combined total was accepted as that system's expected share. In Arizona, the private colleges and universities were invited to submit their combined total, and this was simply added to the Board of Regents' statewide estimates. In Texas, the Coordinating board extrapolates the enrollment growth in private institutions from historic patterns and as a correlative of growth in the public sector.

Other complications attend projections for the community and technical colleges. Models based on high school graduates' college-going rates, the prime engine for many projections of university systems, may undercount adults who do not wish to pursue an academic degree in the conventional manner (day-time, on-campus), or who have been away from high school for a while. Much enrollment growth in the community colleges is likely to be in continuing education and short courses, where people are seeking competencies rather than degrees. These numbers are difficult to derive from conventional models. Demographers who rigorously tackle this issue (Arizona is a good example) often face skepticism and criticism from four-year institutions, since budget and market shares can be an issue in state planning.

On the other side of the age divide, a change that also could affect the accuracy of standard projections concerns K-12 improvement. As the schools improve, more and more students are certain to plan on continuing their education into college, and more are likely to seek entry into the already crowded research universities. This fact alone has prompted some states, such as Maryland and Florida, to insist on a serious study of institutional roles and missions

In the final analysis, uncertainties about the urgency of an enrollment crisis in high growth states may relate less to the projections themselves than to a lack of consensus about which factors generate *real* demand and what will *really* happen if students do seek to enroll.

58The California Postsecondary Education Commission, the Department of Finance, and the Legislative Analyst developed different statewide projections.

The Context: Economic Growth and Higher Education -- Baccalaureate Production, High Demand Programs, and Workforce Training

Institutions and systems of higher education are economic engines and major economic resources and drivers to the communities and regions in which they are located. They also contribute to economic development in the form of the people they prepare for fruitful careers, with their research, and with the funds they attract from federal and private sources, and this is naming only the most obvious. Most of all, they are essential players with great potential in any comprehensive economic development program.

Often the implicit higher education connection with economic growth is in the form of initiatives affecting workforce preparation, frequently narrowly defined as worker training (virtually every person with some education who is working is a member of the "workforce," so a casual distinction that would limit a higher education role in the preparation of people for entry to the workforce to the provision of skill training, and, by extension, to the community colleges and technical institutions, would be too constrictive. All of higher education is involved).

Washington is not the only state considering a strengthened relationship between higher education and economic growth and vitality. Indeed, virtually all are doing so, and it is a very competitive contest. The State Higher Education Executive Officers (SHEEO) association annually surveys its members on the most important higher education issues of the day. Workforce preparation and economic development were ranked third and fifth respectively among the 26 listed. "Adequacy of state financial support" ranked second, a position it has occupied for a number of years. Economic priorities and concerns for sufficiency of funding, in other words, are endemic to higher education in all of the states, and reports and initiatives on the order of these can be found in most. They may differ in style and action, but they agree on the importance of a higher education connection.

In 2003, the Kansas Citizens for Higher Education, an independent association, considered the economic-higher education connection in direct terms involving higher education's immediate contributions to the state and local economies. It estimated this at $5.2 billion, an economic contribution that comprises six percent of the gross state product. The organization identified $2 billion in annual spending, $281 million paid in annual taxes, and 116 thousand jobs. It calculated total institutional expenditures exclusive of payroll as nearly $2.25 billion. The faculty and staff contribution, including direct spending, totaled $1.25 billion. Students contributed $2.1 billion, including direct spending. Visitors spent nearly $.5 billion, half of which was in the form of direct spending. The total economic contribution of the higher education system was $6 billion, or seven percent of the GSP. Employees of the system represented nearly ten percent of

the state's total employment. Taxes, income and sales, were $307 million, or 54 percent of the funding received from the state.

A 2002 report prepared by the staff of the Georgia Board of Regents calculated the economic benefits of that system's 34 institutions on their host communities at more than $8 billion. The analysis took into account expenditures by the institutions themselves for salaries and fringe benefits, operating supplies and expenses and other budgeted expenditures, spending for capital projects, and spending by the students who attended the institutions. Of the total, more than $5 billion (63 percent) was in the initial spending by the institutions and students. The remaining $3 billion was from re-spending, or the multiplier effect. By virtue of the multiplier, according to the report, each dollar spent generated an additional 56 cents for the host region. The report continued with this observation: the employment impact of all 34 institutions was more than 100,000 jobs, 43 percent of which were on campus and 57 percent were off campus in either the public or private sectors. For each on-campus job created, 1.4 jobs existed off campus because of spending related to the institution. The number of jobs represented nearly three percent of total employment in the state.

Finally, in Texas, the Comptroller of Public Accounts reported that Texas institutions of higher education received about $4.6 billion annually in general fund appropriations and local property taxes. But each dollar so invested returned more than $5 to the state economy.

These are some of the patterns behind the economic connection. They are apparent in Washington as well, although here the focus is more sharply on program productivity stated in terms of graduates and organizational issues. The Steering Committee's interest in such matters as increasing baccalaureate degree production is an example.

Washington is about average among the western states in baccalaureate degree production per 100 high school graduates. The following table lists this activity first for the public institutions and then by all institutions, the latter being a reflection of the Committee's interest in both public and private colleges and universities. The conferral figures are for 2002-03. The high school graduation numbers are for 1998.

Baccalaureate Degree Production Per 100 High School Graduates

Ranked by Public Institution Figures
Source: WICHE, based on NCES Data

Rank	State	1998 High School Graduates	Bachelor Degrees Per 100 HS Grads 2002-03 Public Institutions	Bachelor Degrees Per 100 HS Grads 2002-03 All Institutions
1	CO	36,162	49.0	57.1
2	ND	8,648	47.8	56.5
3	MT	11,157	41.7	46.9
4	AZ	40,797	40.9	44.4
5	OR	29,881	38.0	50.9
6	NV	4,549	36.5	37.0
7	**WA**	**57,703**	**34.1**	**44.3**
8	UT	32,156	33.6	56.7
9	NM	18,110	32.1	34.9
10	ID	16,016	31.9	37.3
11	CA	311,732	31.7	41.3
12	SD	10,008	30.9	39.8
13	WY	6,379	27.3	27.3
14	HA	12,107	24.9	40.7
15	AK	6,662	18.8	20.5

Washington ranks 7th among the western states on this measure. At the same time, while it is slightly below the WICHE average (34.2) it is well above the national figure (31.9). It also holds its 7th place ranking when the baccalaureate degrees awarded by all institutions, public and private, are considered.

The subject of college graduates is an important planning issue for Washington. According to the HECB *Strategic Master Plan for Higher Education*, the state needs a coordinated strategy to increase the responsiveness of its colleges and universities. The Plan calls for an increase of 300 per year above current levels in the number of students who earn degrees in high demand fields, bringing the annual totals to 1,500 per year by 2010. Baccalaureate production also is stressed, presented as part of a resource allocation model. The Plan also calls for an increase in the number of degrees to be earned at public and private institutions to the following levels by 2010:

Degrees by Level to be Earned in Washington Public and Private Institutions

Source: HECB Strategic Master Plan

Graduate Degrees	11,500
Bachelor's Degrees	30,000
Associate Degrees	27,000

The allocation of degree production responsibility by sector is shown on the following table, also from the Strategic Master Plan:

	Public Share	Public Goal	Private Share	Private Goal
Graduate (11,500)	57%	6,555	43%	4,945
Bachelor's (30,000)	76%	22,800	24%	7,200
Associate (27,000)	96%	25,800	4%	1,200

These figures accord generally with the present distribution of effort among the two sectors, and the HECB assumption appears to be one of growth at similar rates and retention of historical shares. The Board also considers these goals in terms of enrollment impacts (e.g., 3.05 FTEs per graduate degree; 3.73 per bachelor's degree). The net effect at the graduate and bachelor's levels would be 105,000 annual student enrollments (FTE) by 2010. The various "production" increases in the community and technical college system (for all related functions, transfers, workforce, and improved literacy skills) would require 165,000 students in that sector.

Washington's baccalaureate degree production vis-à-vis its high school graduates is not bad, as these things go -- again, it ranks 7th among the WICHE states in this regard -- but it probably needs to focus more attention on this. If Washington's ratio of baccalaureates to higher school graduates, 34.1 in the public sector, had matched Colorado's, 49.0, an increase of 14.9%, the state total for the year on the above chart would be about 9,000 more than it was. The obverse of this also is true: raising production goals will not mean much unless something is done to increase what is happening at the front-end of the production process.

There also is another point worthy of mention. Washington is one of 14 states that bring in more people with bachelor's degrees then leave. This is not necessarily a matter of either implicit or explicit policy. For any of a number of reasons, economic, social, and environmental, the state operates as something of a magnet for people with college degrees. It ranks fifth nationally in this regard (1990-2000 figures). Seven of the 14 states with positive bachelor's degree migration are WICHE states.

Interstate Migration of Adults with a Bachelor's or Higher Degree

25-64 Year-Olds

Net Positive and WICHE States

1990-2000

State	Net Bachelor's Degrees Increase Through Migration (In Thousands, Rounded) 1990-2000
Florida	193
Georgia	167
Colorado*	106
New Jersey	82
Washington*	**74**
Arizona*	67
Nevada*	64
North Carolina	58
Texas	44
Virginia	33
Oregon*	21
Maryland	20
Idaho*	15
Alaska*	2
New Mexico*	-1
Wyoming*	-4
Hawaii*	-9
Montana*	-10
South Dakota*	-17
North Dakota*	-30
Utah*	-51
California*	-72

Source: Census, IPEDS, higheredinfo.org

When viewed in terms of the ratio of net migration (%) to bachelor degrees conferred for the same period, Washington slips to seventh place. The percentage figures for the positive migration and WICHE states are these:

Ratio of Net Migration to the Number of Bachelor Degrees Produced 1990-2000

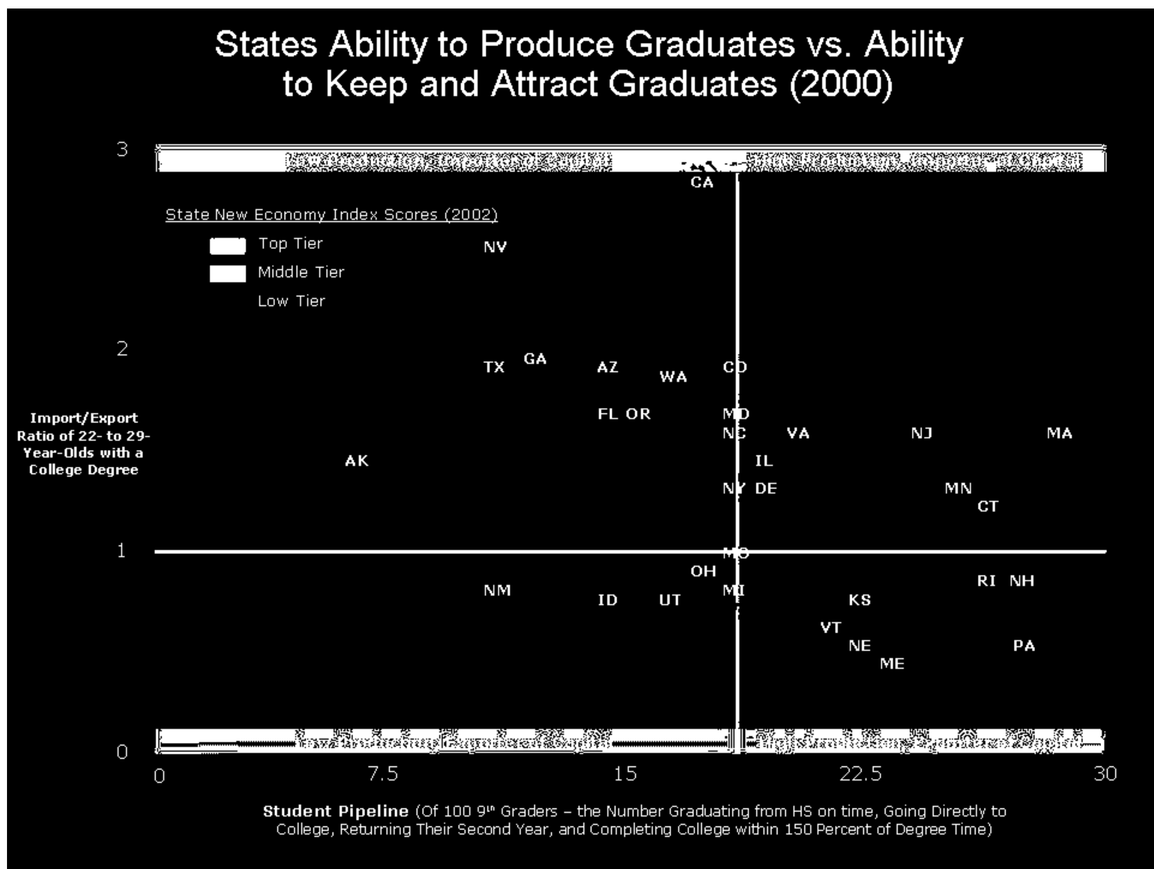
State	Net Bachelor's Degrees Increase Through Migration (In Thousands, Rounded) 1990-2000
Nevada*	189%
Georgia	63%
Colorado*	54%
Florida	42%
Arizona*	39%
Idaho*	36%
Washington*	34%
New Jersey	33%
North Carolina	18%
Oregon*	16%
Alaska*	16%
Virginia	11%
Maryland	10%
Texas	8%
New Mexico*	-1%
California*	-6%
Hawaii*	-20%
Montana*	-22%
Wyoming*	-24%
Utah*	-34%
South Dakota*	-42%
North Dakota*	-66%

Source: Census, IPEDS, higheredinfo.org

According to the Census Bureau, estimated net migration into Washington totaled nearly 60,000 during the period 1995-2000. Those with college degrees comprised about half. Those with bachelor's degrees represented about 30%. Computer specialists, engineers, health professionals, college teachers, life

scientists, school teachers, counselors and social workers were among the leading fields on the list.[59]

Washington's ranking on the New Economy Index (2nd) was mentioned earlier. It also is one of eight out of 17 states classified as "Low [baccalaureate] Producers and High [Baccalaureate] Importers." The eight states so classified that also are in the top tier on the New Economy Index are California, Colorado, Maryland, Nevada, Arizona, Oregon, Washington, and Texas (Colorado, Maryland, and New York are on the cusp). All are relying on substantial numbers of people who earned their baccalaureate degrees in other states to come in and help them sustain their economic growth and advancement. It may be an implicit policy, but it also is a *de facto* one. Washington's pattern vis-à-vis other states is illustrated on the following NCHEMS graphic:



The Context: Enrollment Needs and Distribution Among Institutions, Sectors, and Modes of Instruction

Washington's approach to addressing enrollment needs and distributing them among institutions, sectors, and modes of instruction has been essentially

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59 Washington Estimated Net Migration with Positive Earnings by Age Group, Occupation, and Education Attainment

decentralized. Enrollment ceilings, Authorized FTE funding levels, differential tuition and admissions standards are in place or have been used, but as a general rule they are not presented as tactics aimed at the accomplishment of a distribution system as part of an overall strategic plan.

The state with the classic American higher education master plan in this regard is California. Virtually all other states engaging in comprehensive higher education planning look at one time or another to the California experience, but few can match it either in terms of simplicity or endurance. The features of the California Master Plan that are of greatest interest here are these identified in a summary prepared by the Office of the President of the University of California:

> The original Master Plan was approved in principle by The Regents and the State Board of Education (which at that time governed the California State University and California Community Colleges) and submitted to the Legislature. . .
>
> The major features of the Master Plan as adopted in 1960 and amended in subsequent legislative reviews are as follows:
>
> Differentiation of functions among the public postsecondary education segments:
>
> - UC is designated the State's primary academic research institution and is to provide undergraduate, graduate and professional education. UC is given exclusive jurisdiction in public higher education for doctoral degrees (with the exception that CSU can award joint doctorates) and for instruction in law, medicine, dentistry, and veterinary medicine (the original plan included architecture).
> - CSU's primary mission is undergraduate education and graduate education through the master's degree including professional and teacher education. Faculty research is authorized consistent with the primary function of instruction. Doctorates can be awarded jointly with UC or an independent institution.
> - The California Community Colleges have as their primary mission providing academic and vocational instruction for older and younger students through the first two years of undergraduate education (lower division). In addition to this primary mission, the Community Colleges are authorized to provide remedial instruction, English as a Second Language courses, adult noncredit instruction, community service courses, and workforce training services.

The establishment of the principle of universal access and choice, and differentiation of admissions pools for the segments:

- UC is to select from among the top one-eighth (12.5%) of the high school graduating class.
- CSU is to select from among the top one-third (33.3%) of the high school graduating class.
- California Community Colleges are to admit any student capable of benefiting from instruction.

The Master Plan was subsequently modified to provide that all California residents in the top one-eighth or top one-third of the statewide high school graduating class who apply on time be offered a place somewhere in the UC or CSU system, respectively, though not necessarily at the campus or in the major of first choice. [60]

This basic structure with respect to the missions and enrollment distribution model has remained in place since it was adopted. Other state plans have emphasized institutional roles and missions but have not proved as adroit at matching the two -- missions and admissions -- as California. Admissions standards in Washington, for example, are largely an institutional governance prerogative (community and technical colleges, by state law, are open door institutions responsible to admit students regardless of prior academic accomplishment).

Washington has provided incentives, some indirect, to accomplish a form of distribution (e.g., different prices for different institutions and sectors), but it has avoided the tiered system that characterizes the California university, state university, and community college systems – essentially a model in which admissions are based on high school performance. Even in that comparatively structured arrangement, however, deviations can occur when institution funding is seriously involved, and the UC has been known to dip down into the CSU pool.

The Context: Washington and the Global Economy

(Note: This section is incomplete in that data on Washington's placement among the leading OECD nations had not arrived at the time of writing. The following material is limited and probably should be used cautiously.)

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60 http://www.ucop.edu/acadinit/mastplan/mpsummary.htm. The California Master Plan also reaffirmed California's long-time commitment to the principle of tuition-free education to residents of the state. In the face of fiscal problems, the state was unable to continue its commitment to this principle. According to the UCOP missive, "Because of budgetary reductions, fees have been increased and used for instruction at UC and CSU in recent years, but fee increases have been accompanied by substantial increases in student financial aid."

Members of the Steering and Higher Education Advisory Committees have discussed how Washington compares globally. Their interest is to be expected. The state is a big player in the global economy, and there is a lot of talk about global things. But there is really not a lot of good data.

Comparison data on this aspect of higher education are hard to come by for the usual reasons, not the least of which are different data sets and definitions. The fact that higher education in the United States is distributed among the states does not really help to clarify things, as data on the international scene centers on nations. If one is seeking information on how Washington's higher education efforts compare with other players on the global scene some latitude for interpretation is essential.

The Organization for Economic Cooperation and Development [OECD] maintains data at a national level of detail (the US and other nations). The following table summarizes data on education attainment expressed as the average number of years of education (2003) for selected nations. Washington is not represented on the list, as the Census data do not identify *years* in formal education as an aspect of education attainment. Rather, it organizes the education attainment data around *degrees and levels* of education (population age 25 and over) in progressive order, 'high school graduate,' 'some college,' 'bachelor's degree,' and 'advanced degree.'

Washington ranks above the national average in each case.

	HS Grad or more	Some College or more	Bachelor's Degree or more	Advanced Degree
Washington	87.1	62.2	27.7	9.3
National Average (2000 Census)	80.4	51.8	24.4	8.9

On the OECD scale, stated as years in formal education, the United States ties Norway for first place. On this measure, OECD is looking at attainment 'based on the normal length of education programmes," meaning completion of secondary school. As was noted on the above table, more than 87% of Washington adults have completed high school. The OECB figures for selected members of the organization on the years of formal education are as follows:

Education Attainment Expressed in Average Number of Years in Formal Education 2004
Source: OECD

United States	**13.8**
Norway	13.8
Denmark	13.6
Germany	13.4
Canada	13.1
Australia	12.9
Switzerland	12.8
United Kingdom	12.7
Sweden	12.5
Japan	12.4
Soviet Republic	12.4
OECD Average	11.8
France	11.5
Italy	10.0
Turkey	9.6

The following table represents a crude attempt to fit Washington into a comparative setting, based on 'college degrees.' Among the top 11 OECD countries, the United States ranks eighth in percent of the young work force (Ages 25-34) with college degrees. (The Washington figure is composed of the total percentages of this age group with associate, bachelors, and higher degrees, which seem to apply generally to the OECD's "Tertiary Education Types B, A, and Advanced Research Programmes; the rankings should be used cautiously, however, until the definitions can be verified, efforts at which are underway at the time of writing.)

Percent of the Young Workforce (ages 25 to 34) With College Degrees -- US Average and Top Ten OECD Countries

Canada	52.8%
Japan	51.6%
Korea	46.6%
Washington	**44.9%*** **
Sweden	40.4%
Finland	39.8%
Norway	39.8%

Belgium	38.9%
United States	38.7%
Spain	37.5%
France	37.4%
Ireland	37.1%

*** Combined associate and bachelors and above.

The OECD ranks member countries on the basis of the number of years a five year-old can expect to be formally enrolled in education during his/her lifetime, noting that neither the length of the school year nor the quality of education is necessarily the same in each country.

Number of Years	
21	Australia (21.2)
20	Sweden (20.1), United Kingdom (20.4)
19	Iceland (19.2), Belgium and Finland (19.7)
18	Norway (18.2), Denmark (18.3), New Zealand (18.6)
17	Germany, Hungary, and Poland (17.2, Netherlands (17.3), Spain (17)
16	France, Italy, and the United States (16.8), Portugal (16.9), Czech Republic (16.6), Ireland and Switzerland (16.7), Austria (16.1), Korea (16.4), Greece (16.5)
15	Slovak Republic (15.3)
14	Luxembourg (14.8)
13	Mexico (13.2)
12	Turkey (12.0)

Finally, the issue of Investments in education also brings up the matter of research and development funding. Spending for R&D in Washington and the WICHE states in 2002 looked about like this:

Total R&D Expenditures, Total and by Capita
WICHE States and US Average
2002

Source: NSF, Census Bureau, cited higheredinfo.com

State	**Total R&D (000)**	**R&D Per Capita**	**Rank**
Alaska	128,875	200.9	1
North Dakota	106,078	167.3	2
New Mexico	292,691	158.0	3
Utah	359,556	155.1	4
Colorado	645,291	143.4	5
California	4,881,791	139.5	6
Hawaii	172,664	139.2	7
Montana	122,375	134.4	8
US	36,332,641	126.2	9
Washington	**748,493**	**123.4**	10
Oregon	386,666	109.8	11
Arizona	531,106	97.6	12
Wyoming	41,632	83.5	13
Idaho	93,323	69.5	14
Nevada	126,713	58.5	15
South Dakota	38,449	50.6	16

According to NCHEMS: "These data measure the competitiveness of the states, and the postsecondary institutions within them, in generating cutting-edge research that is associated with a strong economy and high paying jobs. They measure research and development expenditures in the areas of medicine, science, and engineering and include only the R&D expenditures generated by postsecondary institutions (not including federal labs)..."

This paper concludes on this note. It will be continued as a working document as additional data become available.